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ABSTRACT

This book examines the content and effects of the Mother-Child Education Program, an early childhood and adult education program implemented widely in Turkey. The book presents a multipurpose education model, which draws on research indicating that support in early years can affect the development of the child, and which can be used to disseminate early childhood education at a low cost to groups who are most in need. Following a brief preface, the first section of the book examines the Mother-Child Education Program, including the theoretical rationale, how the program is implemented, and how it is disseminated. The second section details the immediate effects of the program, effects on initial school success, and program implementation and dissemination. The third section discusses findings of the study investigating the effects of the program. The fourth section, based on mothers' self-reports, notes changes seen in children, in the mother-child relationship, in the mothers' personality, in the family and the father, and overall opinions of the program. Four appendixes chart the program's immediate effects, initial school success and school adaptation, program implementation evaluation, and a sample enrichment unit from the program. (Contains 137 references.) (SD)

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A FAIR CHANCE

AN EVALUATION OF THE MOTHER-CHILD EDUCATION PROGRAM

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A FAIR

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SEVDA BEKMAN

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Preface

When the foundations for the Mother-Child Education Program were being laid exactly sixteen years ago, our aim was to develop a home based program which was different from the existing model of early education in Turkey and to investigate the effects of this program. At the same time, our aim was to develop a low cost program for those children and their families who were "at risk" because of the characteristics of the environment they live in and therefore most in need of preschool education, but who could not benefit from the services of the existing system because of it's characteristics. It was thought that the expansion of an early childhood system in Turkey would be easier by means of different models. In this Program, we aimed not only to provide an intervention that would be effective in the development of the child but also to support his/her immediate environment. As the Mother-Child Education Program aims to reach both the child and the mother, it is a multipurpose program and a good example of both adult education and preschool education programs.

Evidence derived from scientific research on both the short and long term positive effects of the Program supported the concept of making the Program an important part of the system. Although implementation of the Program's various components in a service framework began before the study was completed, the Program really began to go to scale with the establishment of the Mother-Child Education Foundation. It has been possible to reach increasing numbers with the collaborative efforts of the Mother-Child Education Foundation and the General Directorate of Apprenticeship and Non-Formal Education of the Ministry of National Education. Important changes were made in the Program during the transition from a scientific research framework to the service framework it now occupies. The Program was no longer the Program of sixteen years ago and was being implemented extensively rather than in the restricted application of the research framework. Thus, a new study began with the notion of investigating how these changes were reflected in the effects of the Program. This book encompasses the results of the evaluation research on the revised Mother-Child Education Program which is being applied throughout Turkey as a program of the General Directorate of Apprenticeship and Non-Formal Education, Ministry of National Education. The study was completed with the support of the Bernard Van Leer Foundation.

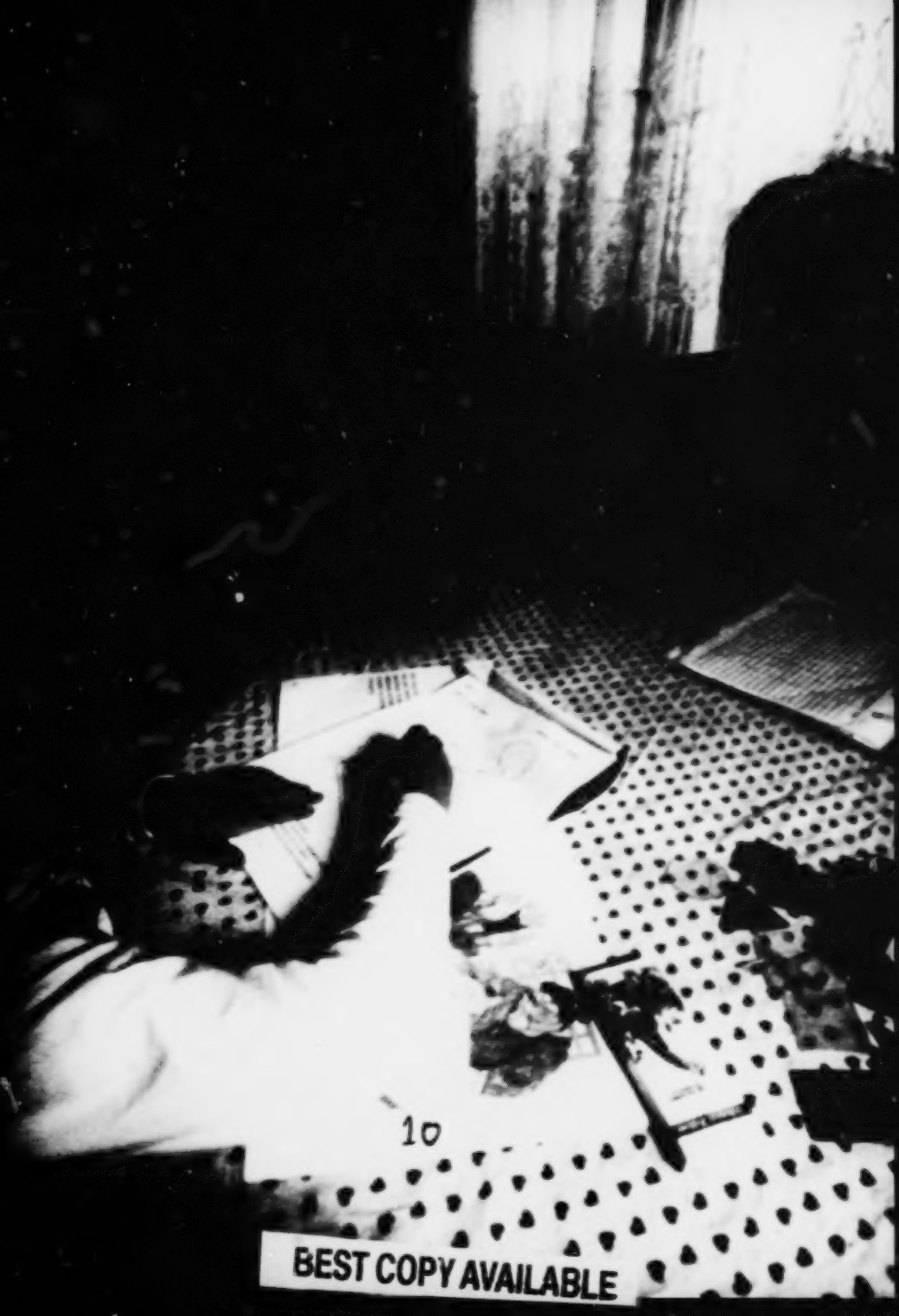
The results of the study show us that the Mother-Child Education Program brings success at school. The results also show that the Program can bring children who are under "at risk" in terms of development to a level where the demands of elementary education can be met. The Program's ability to overcome the negative effects related to social and economic circumstances is considered to be very important. This allows us to state that the Program can reduce the inequalities that emerge due to social and economic circumstances. A determination of the positive effects of the Mother-Child Education Program, a home based program, on mothers and children is a finding which will guide us in determining our policies. It emphasizes the necessity of not being dependent on a single model (institution centered; kindergartens), but spreading various models (home based, center based) when deciding on policy to expand preschool education in a country where it only reaches a very low percentage of the target group and where these services cannot reach the population that is in most need.

The sustained efforts that have made it possible for the Mother-Child Education Program to become a national program have been provided by collaborations that are rarely seen in Turkey. I would like to mention these here briefly since the significance of the Program's historical development cannot be emphasized without pointing these out. One non-governmental organisation (Mother-Child Education Foundation) adopted the Program developed by the faculty members of a University (Boğaziçi University) with scientific bases and began it's provision as a service. This implementation later initiated the collaboration of the State and an NGO. The Ministry of Education and the Mother-Child Education Foundation carried the Program all around Turkey every year in increasing numbers. This was in fact a collaboration between a state-NGO and a University. Today, in 1998, we can see examples of such collaborations between different agencies but when we began this project years ago it was the first in our country. This shows us that besides the contribution of the Program to the field of education it has also played a role in the development of civic society.

Since this book includes the results of a study investigating the effects of the Mother-Child Education Program, I would like to mention the organisations and persons who have contributed to bring it to this stage. We thank the Bernard Van Leer Foundation for their support in the study. We owe special thanks to Rita Swinnen from the Bernard Van Leer Foundation who supported us all throughout the various stages and believed both in the importance of the Program and the necessity of validation through research. This research would not have been realised without Bilge Topaç from the Mother-Child Education Foundation Research Unit. She had various responsibilities as a field coordinator in collecting, coding and analyzing the large amounts of data and in training the field workers. Ayşesim Diri conducted the analyses of the research with great effort and precision. I would like to thank all those who helped us in the field studies in Istanbul, Ankara, Izmir and Şanlıurfa and especially students of Boğaziçi University Educational Sciences Department for their efforts in the field. Throughout the project employees of the Mother-Child Education Foundation supported us at various times in various ways. Their support was very important in the realisation of the research. Many people contributed to this book and enabled it to take the shape that you are holding in your hands. I thank them all.

This Program could not be applied this extensively without the teachers and province coordinators of the General Directorate of Apprenticeship and Non-Formal Education. If it had not been for their efforts there we would not have had the chance to undertake this study. With no doubt the greatest support for the study came from the mothers who participated in the Program and all the mothers and children who accepted a part in the study. Without them we could not have accomplished anything ...

Sevda Bekman
Research Project Director
May, 1998



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THEORETICAL AND PRACTICAL RATIONALE FOR THE MOTHER-CHILD EDUCATION PROGRAM

Importance of Home Environment in Intervention Programs

The explanatory framework for the rationale of the Mother-Child Education Program is based on different approaches. Like various others, the Program aims to intervene in early ages for those who are believed to be at risk due to environmental conditions and is designed to provide cognitive and social enrichment during the early period of development. It is the responsibility of society to provide care and protection for young children, especially for those particularly vulnerable due to the conditions of the environment they live in. It is better to prevent the distressing effects of such conditions by early intervention rather than remediating them through later treatment (Shonkoff and Meisels, 1990). As Myers (1992) points out very clearly; it is every child's right to develop to their full potential and children are dependent on others for the realization of their rights. The acceptance of this right constitutes the rationale of early childhood development and education programs especially for those who are considered to be at risk.

The model of Sternberg, Grigorenko and Nokes (1997) underlines the capacity all children have to develop cognitive expertise for adaptation to their environment. While an unfavorable environment deactivates the cognitive mechanism, a favorable environment activates it. The model proposes that almost all children can reach the expertise necessary to adapt to Socio-cultural demands and that all children have the capacity to learn; but they should be provided with the appropriate environment. In this environment, internal attributes (metacognitive, learning, thinking and motivational skills) and external attributes (nutrition, freedom from infection, quality of stimulation, cognitive and behavioral scaffolding) are important. This suggests that any program which aims to promote the development of children in "at risk" environments should target these external and internal attributes.

There is a variety of evidence from research illustrating that children who grow up in environments with disadvantaged characteristics have a higher probability of lower cognitive performance, which is frequently associated with later school failure (Hess, 1970; Lazar and Darlington,1982). The shared goal of intervention programs is to promote a healthy overall development which will enable the successful transition to school, and in the long run contribute to school adjustment and success. The underlying understanding is that cognitive and social development should be enhanced through strengthening intellectual stimulation and the developmentally appropriate characteristics of the environment (Campbell and Ramey, 1994). Children coming from empowered environments are believed to enter school with better preparedness and with an increased chance of success. Early school success brings later academic success and success in life (Schweinhart, Barnes and Weikart, 1993).

It is this explanatory framework accepted by many intervention programs that sets the stage for the Mother-Child Education Program. Although the framework signals certain cause-effect relations, it really does not provide the evidence for the specific connections, but simply points to the causal conditions which make the effect more likely to occur. These causes are easily considered as contributing factors (Schweinhart and Weikart, 1980).

As a result of interest in how the child's environment affects his growth and development, a shift has been observed from a child-centered to an ecological approach in programs to promote early childhood development. Thus, an approach which emphasizes the importance of the interrelationships between the child, the family and the social support systems (Bronfenbrenner, 1979; Weiss and Jacobs 1984; Zigler and Berman,1983) are found to be embodied in many programs.

It is the transactional interpretation of development (Sameroff, 1975), and Bronfenbrenner's (1979) view of the family as a system embedded in the larger ecological framework of systems which dominate the underlying philosophy of the Mother-Child Education Program. Here the aim is to give equal emphasis both to the child and his or her environment. Thus, the experiences provided by the environment are not viewed as independent of the child.

It was two decades ago that Bronfenbrenner (1975) pointed out that the effects of

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intervention programs are strengthened if parents are involved in the intervention. Bronfenbrenner stated clearly that if the parents are not included in the programs then effects are likely to deteriorate over time. Consequently, parents were viewed as active partners of intervention programs whether they focused on children or parents.

Sameroff (1975), in the transactional approach, identifies developmental outcomes as neither the function of the individual nor the experiential context alone. Development is seen as the product of the dynamic interaction of the child and the experience provided by his family and social context. Equal emphasis is given to the child and the environment. The interaction of the child as a biological organism with the immediate environment, and the significance of the interplay of social systems in the social development of the child are important. Thus, the role of the immediate environment in the care and development of the child is vital. Long lasting impact of early childhood development and education programs are believed to be achieved with programs that assign an active and a preventative role to the mother and provide social support to the family (Upshur, 1990).

It is the ecological perspective and the systems approach which contributed to the involvement of the family in early intervention. This perspective raises the importance of interactions in the development of the child and the family as the essential component of the environment that influences and is influenced by the child. This two way interaction is believed to produce different outcomes both for the child and the family (Simeonsson and Bailey, 1990). Furthermore, Lombard (1997) suggests that changes in the inputs of the participants (children and families) will bring changes in the dynamics of the relationship and in the results of the interaction. She specifies this by an example where the changes brought about in the mother by changes in her knowledge, expectations, skills in teaching and in her attitudes are expected to bring changes in the growth and development of the child.

Minuchin (1985) stresses the importance of the use of family systems theory in interventions, based upon the belief that family triads and even larger systems change over time as a result of sequential interactions among the members of the system. Thus, the child influences the parent, the parent influences the child and one parent can easily influence another parent, causing a modification in the linkage to the child in the family system.

Meisels (1985) has summarized the current consensus as "The evidence from a whole research demonstrates that the quality of parents' behavior as caregivers and teachers makes a difference in the development of infants and young children". The evidence seems convincing that parents can be taught both new skills and additional knowledge related to child rearing and can be helped with their child's specific developmental problems. There is a rich research literature describing both the short and long term impact on children and their families through participation in such early intervention as home visiting, parent groups and day care (Lazar and Darlington, 1982; Lombard,1994; Schweinhart et al., 1993).

In his discussion of the rationale of those programs which aim to teach parenting skills, Gordon (1978) identifies three sets of family factors which are found to be associated with intellectual behavior and personality development of children. The first set of factors are demographic, and the other sets are related to the variables of family interaction; cognitive factors and emotional factors. Cognitive factors include the role of parents in the cognitive development of the child, the cognitive environment present at home and the attitudes of parents towards the child's cognitive functioning. The emotional factors are represented in the consistency of child management, communication with the child, emotional security and self esteem of the mother. Thus, based on this rationale one of the goals of intervention programs is to improve parental capabilities to provide a home learning environment that fosters positive elements of the cognitive and emotional factors. Gordon (1978) further underlines the importance of having a system perspective sensitive to cultural pluralism for parent education programs since there is a functional interrelatedness of systems intruding on the parent-child relationship. The family does not operate in isolation, but is integrally related to its mesosystem, which in turn interacts with the exo system which is placed in a larger macrosytem. Therefore Gordon, in his suggestion for the systems perspective in parent education programs specifies the role of the linkages between home, school and community.

Involving parents in the education of their children is considered an important component in most early childhood education programs (McKey, Condelli, Ganson, Barrett, McConkey and Plantz, 1985; Rich, 1985; Yavuzer, 1986, 1997) and in promoting children's success in school (Delgado-Gaitan,1991). Support comes from White, Bush and Casto (1985) for the benefits of parent involvement in intervention studies. There are different views for the beneficial value of parent involvement programs. It is argued that if parent involvement carries interactive characteristics it will be more beneficial (Roskos and Newman, 1993). The term parent involvement has been defined in different terms; teaching parents specific skills, social and emotional support, exchange of information between parents and professionals, participation of parents in a team, development of appropriate parent-child relationships and assisting parents in accessing community resources (White, Taylor and Moss, 1992). The definition of parent involvement will not be complete without the concept of empowerment. It emphasizes the importance of giving power to the hands of the parents. It is the feeling that they are in control of the situation (Cochran, 1988).

Recognition of the importance of having an ecological perspective has also prompted the emergence of different models in early childhood programs, moving away from didactic efforts to more partnership-based models. It was recognized that those programs which have multilateral and bilateral models provided the social support to parents since such programs have a commitment to strengthening families (Zigler and Weiss, 1985). Family support programs aim to generate and strengthen an informal support system and in turn reduce the need for formal support. There is growing agreement that supportive interventions should be continous. Although there are certain critical periods in the development of children, parents have a continuous commitment to shape their behavior to meet the demands of the children. This necessitates continous support programs throughout the child rearing years.

The Relation of Home Literacy Activities to School Success

The quality of a microsystem (immediate environment) is very much dependent upon the capacity to operate in, in Vygotsky's terms, "the zone of proximal development" (Garbarino, 1990) . Vygotsky's socio-cultural approach (Vygotsky, 1962, 1978) which has the basic assumption that mental processes have their origin in social processes thus, sets the stage for one of the main components of the Program. Verbal interaction of the adult has an important dual function for the cognitive development of the child since it integrates both the natural and the cultural determinants of development. First, on the social plane between people, as an interpsychological category and second, within the child, as an intrapsychological category. The relationship between interpsychological vs. intrapsychological development is captured by the notion of proximal development. The zone of proximal development determines the distinction between actual vs. potential levels of development. The potential level is above the actual level and it is reached through the interaction with an adult who is instructing the child. Although the potential level is fixed by the child's state of development and intellectual possibilities, instruction can be structured to maximize growth (Aksu-Koç, 1992). In addition, Sylva and Wiltshire (1993), for example, underline the importance of effective instruction within the zone of proximal development which will lead the child towards the outer bounds of his competence in programs which are directed to promote development. Similarly, Mills, Dale, Cole and Jenkins (1995) have demonstrated that when the effect of mediated learning is compared to direct instruction, lower performing children benefited more from the mediated learning than the direct instruction.

School success or school failure is related to how ready the child is for school. In this respect, his literacy and numeracy skills and the home literacy environment are important factors for school readiness. Differences in the literacy environment were shown to be related to children's oral language which puts children from low income families at risk because they appear to have low level verbal skills (Campbell and Ramey, 1994; Payne, Whitehurst and Angell, 1994). It was also shown that limited opportunities for literacy-related activities in the home may have significant effects on language development which is important for formal schooling and later literacy achievement of children from low income families (Payne et al., 1994). Aksu-Koç and Kuşçul (1994) in a study investigating the role of the home environment on children's literacy skills in Turkey has shown that different home environments have different effects on the child's literacy level and cognitive ability, with low income environments being less advantageous than middle class ones. Several studies demonstrated that children from low-income families are read to less frequently than children from higher socio-economic groups (Feitelson and Goldstein,1986). There is a growing literature that points to the correlation between the frequency of shared picture book reading in the home and preschool children's language abilities (Crane-Thoreson and Dale, 1992; Rowe, 1991). All these suggest that limited opportunities for literacy related activities in the home may have significant effects on language development and later reading achievement of children (Oktay,1983; Raz and Bryant, 1990).

For a sound foundation for success in schooling, the primary care giver; usually the mother, is believed to play an important role by mediating between written language and the developing child (Sulzby, 1986). The origins of emergent literacy are traced to early mother-child interactions during activities related to picture books and reading material. These early mother-child interactions are supposed to consist of "scaffolding dialogues" (Bruner, 1985; DeLoache and DeMondeza, 1987). It is hypothesized that mothers try to create a "zone of proximal" development for the child (Pellegrini, Perlmutter, Galda and Brody, 1990) in that what children are not able to do by themselves is done with the help of the mothers.

Furthermore, Snow, Nathan and Perlmann (1985), stated that early parent-child interactions on books contributes to literacy development of children as well as to language. After many sessions of book reading the child understands and produces decontextualized language which is a crucial prerequisite to literacy. Specific effects of reading on early literacy development (Mason, 1992) and literacy growth (Dickinson and Smith, 1991) have been described in many studies. Correlational and longitudinal studies done in the home have demonstrated that frequency of book reading in the home during preschool years is an important factor for child's readiness to benefit from literacy instruction (Chomsky, 1970; Goldfield and Snow, 1984; Wells, 1985). The nature of the interaction which occurrs during book reading is also considered to be important. Conversations that pose cognitive challenges like talking about vocabulary, analysis of character motivations and predictions about outcomes are valued (Heath, 1983; Snow and Dickinson, 1991). Dickinson, De Temple and Smith (1992) put forth the critical importance of book reading for academic success and the role of book reading for children coming from disadvantaged environments. The same view; the contribution of the literacy exercises to primary school success has been argued by Cazden, Snow and Heise-Baigorria (1990).

Whitehurst, Epstein, Angell, Payne, Crone and Fischel (1994) introduce a prevalent model of the relations between emergent literacy experience and the development of literacy. Preschool literacy activities (shared reading, sound and letter recognition) are expected to have a relation with emergent literacy abilities (language use, writing, linguistic awareness and print concepts) and emergent literacy abilities to have a relation with reading (decoding and comprehension). In the discussion of the results of their study which examined this relationship, they stress the effects of preschool literacy activities like shared reading and sound and letter recognition on the components of emergent literacy abilities, and the positive effects of literacy activities at home on the language abilities of preschool aged children. Furthermore in a study by Lonigan (1993), the effects of home based literacy intervention were found to be more than the effects of center-based or combined intervention (center-based and home-based) programs on the language skills of the children. Thus, Whitehurst et al. (1994) raises the issue that if the interventions aim an increase in the language skills of children in the late preschool ages with children from poverty backgrounds, they need to focus on the home environment.

Effects of Intervention Programs

Early childhood development and education programs gain importance in countries where there are more children "at risk". It is possible to modify distressing socio-economic or gender related inequalities and provide the maximum conditions for survival and development through programs of development and education (Myers, 1992). Programs which reach at risk children and their families in the early ages are successful in providing a better start for academic performance which is in turn associated with important skills and attitudes of future adult behavior. Existing programs which aim to empower the development of children from risk environments have different strategies. One of these strategies is "delivering a service directly to children". The immediate goal of this approach is to enhance the child's overall development and the program often takes place in "centers" outside the child's home. Studies of the effectiveness of these services are illustrated either by experimental or non experimental programs. The onset of these initiatives dates back to the 1960's as the result of war on poverty at that time. Unfortunately, the massive Head Start program was judged to be a failure too early. Especially the Westinghouse report (Cicirelli, Evans and Schiller, 1969) and the writing of Smilansky (1979) were effective in this judgment. Kağıtçıbaşı (1997) summarizes the problems of early evaluation as a unidimensional conceptualization of success with IQ, focusing on the child abstracted from his environment and the short time span used for evaluation. She sees the main drawback as the unrealistic goal attributed to Head Start; raising IQ, a goal which resulted in disregarding other positive outcomes that the program brought (Kağıtçıbaşı, 1997).

Later evaluations of Head Start indicated better cognitive competence, school readiness and school achievement (Hubbell,1983) as well as socio- emotional development and health (McKey et al., 1985).

It is after realizing the importance of going beyond IQ as the exclusive outcome measure that evaluation studies captured the effects of such programs. In particular, effects on parents, parent-child relations, family dynamics and their relation to sources of formal and informal support and the community are believed to broaden the range of effects of such programs (Weiss and Jacobs, 1984). More sound evidence contradictory to the initial findings concerning the lack of effect or negative effects of programs of early development and education, comes from experimental studies (Beller, 1983; Gordon and Jester, 1980; Gray, Ramsey and Klaus, 1982; Palmer, 1983;). There is now ample evidence for the positive effects of such programs on the child's short term development, and long term healthy adjustment, educational and occupational achievement (Ramey, Yeates and Short, 1984). These programs also have specific impact on the mother's child rearing styles and employment opportunities (Berrueta-Clement, Schweinhart, Barnett, Epstein and Weikart, 1986; Royce, Darlington and Murray, 1983; Upshur, 1990). One important evidence comes from the Perry Preschool Project which provides empirical data not only for short but also for long term positive effects (Schweinhart et al., 1993). Other empirical data come from the report of the Consortium for Longitudinal Studies (Lazar and Darlington, 1982) which reviews 11 studies involving parents with different roles. The revised programs had successful long term effects such as less need for special education, less grade retention, better achievement test scores and more achievement oriented attitudes (Beller, 1974; Deutsch, Deutsch, Jordan and Grallo,1983; Gray and Klaus 1970; Karnes, Teska and Hodgins, 1970). Similar results were also obtained in a 10 year follow-up of a program for children from birth to 30 months of age (Provence and Naylor, 1983; Seitz, Rosenbaum, and Apfel, 1985).

As discussed above, in the last decade an increased interest in programs which aim to improve the capabilities of families to cope with the developmental needs of children are observed (Gallagher and Vietze, 1986; Parke, 1986; Turnbull and Turnbull 1986). Gallagher (1990) lists the reasons for this interest as a growth in research evidence on the influence of the family on the child's development; families being seen as the most important focus when children are young; the importance of context in the development of children; and growing acceptance that parents may need assistance. Gallagher (1990) summarizes the assumptions related to family focus interventions as: if children change; other family members will also change and that the provision of information, teaching parenting skills, personal counselling, increasing parent empowerment, and more support services can change families.

There are various studies which provide evidence to verify these assumptions. Powell and Ogle (1985) discuss the fact that programs benefiting children have an impact on the family. Further clarification about the impact of the intervention on family members comes from Guralnick (1988). He suggests that the changes in family members are observed after intervention programs irrespective of their effects on children. Long term evidence for the effects of intervention programs on family members is provided by Portes, Dunham and Williams (1986). Programs which aim to teach new skills and additional knowledge related with child rearing practices are observed to change family-child interaction, child's cognitive, verbal, conceptual and abstraction skills (Dokecki and Moroney, 1983), social relations and self respect of the parents (Vadasy, Fewell, Meyer, Schell and Greenberg, 1984) and improve parenting skills. For family focused intervention programs to be effective it is suggested that they focus on specific rather than general skills and that they apply specific rather than general instruction (Barrera, Rosenbaum and Cunningham,1986; Baker and Brightman, 1984). One of the roles of intervention programs is to support parents in taking decisions and control over their lives. Such intervention programs were observed to increase satisfaction with life, feelings of psychological well being and improved job training and employment opportunities.

Programs which prefer strategies that target the family rather than children have only indicated short term effects both on children and parents. Increase in IQ (Andrews, Blumen-Chal, Johnson, Kahn, Ferguson, Lasater, Malone and Wallace,1982; Slaughter, 1983) and children's school performance (Cochran and Handerson,1985; Levenstein, O'Hara and Madden, 1983; Slater, 1986) are among the short term effects of parent education programs. In addition there is evidence of the effects of these programs on maternal behavior, use of positive and facilitative language interactions with the child and better child rearing attitudes (Andrews et al. 1982; Dickie and Gerber, 1980; Lambie, Bond, and Weikart, 1974). Better parenting skills and better parent-child interactions and less social isolation are observed for those parents who are involved in intervention programs (Morgan, Jeanette and Allin,1990; Pehrson and Robinson 1990; Telleen, Herzog, Kilbane, 1989). Long term evidence comes from the Yale Child Welfare Project which indicates effects such as being more self supportive, higher level of education and smaller family size (Seitz et al., 1985). There are also indications that children of parents involved in long term parent education programs are less likely to be enrolled in special education classes for as long as 7 years after the program ends (Jester and Guinagh, 1983) and display better health and development (Palti, Mansbach and Kurtzman, 1987). Further positive effects of caregiver-focused interventions on children and mothers are stated by Larson (1980) and Olds, Henderson, Tatelbaum and Chamberlain (1988).

Evidence of the impact of early childhood development programs on school enrolment, (Chaturverdi, Srivastava, Singh and Prasad, 1987; Filp, Donoso, Cardemil, Dieguez, Torres and Schiefelbein, 1983; Lal and Raj, 1986; Myers, 1988; Nimnicht and Posada, 1986), school progress (Chaturverdi et.al.1987; Filp et al.1983; Lal and Raj, 1986; Nimnicht and Posada, 1986) and school performance (Chaturverdi et.al.1987; Filp et al.1983; Lal and Raj, 1986; Richards,1985; Wagner and Spratt, 1987) come from studies done in Latin America, Asia and East Asia .

Explanations of these positive results have shown increased appreciation for the importance of the context or the environment surrounding children at risk. Other than the influence of the family (parents) on the child's developmental progress, the school (teachers) is seen as the most influential group when children are young (Gallagher, 1990). It has been argued that those children who can meet the demands of school after intervention programs are viewed as successful by their teachers and the programs will, in turn, be reinforced, and in fact the child will be more successful in their academic progress and performance. All these will effect readiness for success in adult life (Berrueta- Clement et al. 1986; Myers 1992; Woodhead 1986).

Seitz and Provence (1990) after their extensive review of the intervention research conclude that although it is impossible to decide whether child or caregiver-focused intervention is better due to the limited information available for disadvantaged environments, caregiver-focused interventions may lead to more comprehensive changes for families and in turn result in a broader range of beneficial outcomes for children than a child-focused approach. Furthermore, for children whose environmental conditions threaten their development, interventions should focus on their environments, parental support programs and empowering and job training for parents. Such approaches may be more time consuming, difficult and at times more expensive but they have a higher chance of success than establishing preschool programs (Farran, 1990).

SETTING FOR THE MOTHER-CHILD EDUCATION PROGRAM

Background information on the educational facilities available to the Turkish population will provide an understanding of the setting in which the Mother Child Education Program (MOCEP) is implemented and the various roles it plays in that setting. According to 1995-1996 figures, Turkey is a country with a population of about 61,797,000 and a per capita income of $2780. During the period of 1990-1996, the government allocated 3% of the budget to health, 12% to education and 10% to defence (The state of the world's children, UNICEF 1998). In 1998 the allocations have been 8.37% for education, 9.46 for defence and 2.64 for health (Source: Board of Education).

According to the 1995 figures 82% of the Turkish population is literate. The literacy rate is different for males (92%) and for females (72%). When male and female populations are considered separately for the period of 1993-1997, 98% of the male population who should attend elementary school does so, while for females this percentage is 94. According to the 1990-1995 figures, among the enrolled population 95% reaches the last year of elementary school. Enrolment rate for secondary school is 76% for males and 50% for females (The state of the world's children UNICEF 1998). One should bear in mind that during the time these figures were compiled, compulsory education in Turkey was five years of elementary school. With a law passed in 1997, compulsory education has been raised to eight years.

Of the 61,797,000 population, 6,388,000 is under the age of five. According to the 1996 figures 1,371,000 infants are born each year. The mortality rate for infants and for under fives decreased between the period of 1960-1996. For the population under five, there were 219 deaths for every 1000 children in 1960, this number decreased to 133 in

1980 and to 47 in 1996. While the decrease in death rate was 2.5% during 1960-1980, it was 6.5% during 1980-1996 (The state of the world's children, UNICEF 1998).

In the descending order of mortality rates for under fives in the world, Turkey is 82nd. The same decreasing trend is also observed for the infant mortality rate. While the number of infant deaths was 163 for every 1000 infant in 1980, this number decreased to 41 in 1996 (The state of the world's children, UNICEF 1998).

Turkey does not have a standardized widespread system of Early Childhood Education. Nearly all the services are center based and located in the large cities. Only 9 % of 5-6 year olds attend any sort of institution. When the whole target population is considered (0-6) this percentage drops even more.

The existing early childhood education services fall into the following main categories . Nursery classes (kindergartens) which cater for children between the ages of 5-6 in the year before they begin formal schooling, preschool centers (day care centers, child houses) which cater for children aged between 3-6, creche and day care centers which cater for children from 0-6. In addition children between the ages of 0-18 and up to 25 where necessary, designated as in need of protection by the courts, are under the protection of the state in children's homes or training institutions appropriate for their age group.

These services either belong to the Ministry of National Education (MONE) or General Directorate of Social Welfare and Child Protection Agency of the Prime Minister's Office (SSCPA) or they belong to individuals but are under the supervision of either of these two government agencies. While MONE is mainly responsible for the development and education of the age group 4-6, SSCPA is responsible for the age group 0-6. The government institutions which belong to MONE mainly fall in the category of nursery classes since nursery classes are attached to the compulsory education institutions i.e. basic education schools. There are few governmental preschool centers which belong to MONE. The kind of institutions which are under the supervision of MONE but belong to individuals are mainly preschools or nursery classes of private elementary schools. On the other hand, the governmental institutions which belong to SSCPA are mainly creche

TABLE 1
Numbers and Types of Early Childhood Services

Sources	Services	No. of schools	No. of Childrens
MONE	**Nursery classes (5-6)**	**6.460**	**148.855**
	Preschools (3-6)	129	11.002
	Application schools	354	7.972
PRIVATE/MONE	Nursery classes (5-6)	332	8.226
	Preschools (3-6)	182	5.202
SSCPA	Creche and DaycareCenters (0-6)	27	1.123
PRIVATE/SSCPA	Creche and DaycareCenters (0-6)	1.049	46.252
TOTAL		8.563	229.634

and daycare centers. The nongovernmental institutions which are under the supervision of SSCPA either cater for children between the ages of 3-6 and take various different names other than preschool or cater for children between the ages of 0-6 and are called creche and daycare centers. The institutions which serve children who are in need of protection are governmental services and belong to SSCPA. In addition to these facilities there are creche and daycare centers which belong to other public organizations (Ministry of Monopoly) and institutions (factories, universities) and the number of children that attend these centers are 13,977 (1997 figures; Directorate of Preschool Education).

The above summary (Source Directorate of Preschool Education and SSPCA) shows the nature of the existing system and the number of children served. When the quality and the effectiveness of the system is investigated the picture is not much better than that which is reflected by the quantitative data. The government not only aims to go to scale with only a center based education model but also defines the target group of the early childhood education system very narrowly. If any attention is given to early childhood education and development by the government it is always for the age group 5-6. This narrow definition and single model of early childhood education and development means that the percentage of the population reached will always be unsatisfactory. The Directorate of Preschool Education which is responsible for early childhood education within MONE does not consider programs which target parents of young children as a service of early childhood education and development. Under the present condition the shortage is even more critical for children from less stimulating environments because most of the facilities available (preschool centers, day care centers, nursery classes) are privately owned and charge tuition. Thus, the existing system doesn't target children from environments with high risk conditions. Government resources have been allocated mainly to compulsory education which leaves government sponsored services in early childhood education and development at a rudimentary level.

Turkey has undergone rapid social change involving mass migration from rural to urban areas. The number of women, including mothers of young children, employed in non agricultural jobs outside the home has increased rapidly. This has created a demand for center based education and a consequent increase in the number of such centers. The combination of a rapid increase in the number of centers, inadequate supervision and control by government agencies, low expectation on the part of parents, and diffusion of responsibility within government agencies has led to the development of both a qualitatively poor early childhood education system and of a quantitative gap between the services that are available to different sectors of society. The present services are distinctly divided into two with respect to their aims: custodial and educational. Unfortunately, the number of custodial centers far outweigh the number of educational ones (Bekman 1982; Bekman 1993; Kağıtçıbaşı, Sunar and Bekman, 1988).

Research undertaken (Bekman, 1982, 1993; Kağıtçıbaşı, 1996; Kağıtçıbaşı, Sunar and Bekman, 1988) examining the effectiveness of this system has confirmed that the aim of a center effects all components of preschool education (physical arrangement, materials and equipment, program, teacher behavior, staff/child ratio, parent-teacher relationship and evaluation means). Studies comparing centers in terms of these components have found that in educational centers physical arrangement is directed towards facilitating the overall development of the child; the quantity and the quality of materials and equipment are adequate; the groups are not crowded and there is a low staff/child ratio (Bekman, 1982, 1993; Kağıtçıbaşı, 1997; Kağıtçıbaşı, Sunar and Bekman, 1988). The behavior of teachers in these centers is cognitively oriented and aims to enrich the child's overall development (Eryorulmaz, 1994). It has also been found that the enriching environment in educational centers overcomes expected differences due to social class (Bekman,1982; Ünver, 1991). For example, working class children in such centers engaged in play behavior which was cognitively more complex and held higher levels of social participation than that of the middle class children in some other educationally oriented centers. It is well attested in the literature that quality in preschools is very closely related to the adequate application of the components of preschool education (Schweinhart, 1997; Sylva, 1996; Woodhead, 1996). In the light of these findings, one should be cautious of accepting any type of child care and emphasize the need for quality child care.

Center based early childhood education is one of many models of early childhood education. However it is the most expensive and the hardest to the implement on a large scale. Furthermore, the target groups who will benefit from the services are varied and have different needs which are difficult to meet within the confines of a single model. It might therefore be easier and more beneficial to provide services by implementing different models for different segments of the population rather than expanding one model for all the segments (Myers, 1992). If we wish to overcome social and gender based inequalities and give a fair start for all children at the time of formal schooling, priority should be given to those who are more in need of such programs due to their environmental conditions. Another important issue is to give priority to cost effective programs that can be applied on a large scale basis. These issues gain special importance, in a country like Turkey where the early childhood education system is neither compulsory nor widespread.

Myers (1992) lists eight arguments for the rationale of early childhood care and development programs as well as guidelines for these. He sees such programs as carrying an important role in enabling children to reach their full potential which he perceives as a basic human right. Scientific evidence for the importance of early ages and the effects of early intervention programs on development constitutes one of the many reasons for investing in early childhood development and education. Another important factor which Myers spells out concerns social equity: intervention programs have a role in overcoming socioeconomic and gender related inequalities. Such programs also have a role in increasing production and cost savings since they invest in child development. This is the economic benefit for society. Changing social and demographic circumstances which result in increasing the number of vulnerable children, change in family structure, urban-rural migration and an increase in the number of women in the labor force also necessitate investment in early childhood programs.

For the guidelines of such programs Myers underlines the importance of giving priority to families and communities who are "at risk", and to contextual approaches (different environments of the child and different socio-cultural contexts) which recognize local ways and complementary programs. As complementary programs he identifies five different program approaches: attending to children, educating and supporting caregivers, promoting community development, strengthening national resources and strengthening demand and awareness.

In view of these arguments and guidelines the early child development and education services present in Turkey fall well behind the satisfactory conditions. From the perspective of quality and quantity the system is neither at a level to meet these arguments nor the guidelines. It is all these concerns and the present situation of early childhood education in Turkey which gave rise to the development of the Mother-Child Education Program.

HISTORICAL BACKROUND OF THE MOTHER-CHILD EDUCATION PROGRAM

Before the Establishment of the Mother-Child Education Foundation (MOCEF)

The origins of MOCEP date back to 1982 and rest on the research project entitled "Turkish Early Enrichment Project" (Bekman,1990, 1995, 1998; Kağıtçıbaşı, 1991, 1992, 1996, 1997; Kağıtçıbaşı, Bekman and Göksel 1995; Kağıtçıbaşı, Sunar and Bekman, 1988). This project was a four year longitudinal study which set out to assess the impact of both center-based education and home intervention on the overall development of the child. The center based education was not introduced by the project, rather existing centers were studied in terms of their orientation, custodial vs. educational.

At that time the home intervention program had two main elements : a program to foster the overall development of the child and a program to foster his cognitive development. The former element which was developed by the research team and named the "Mother Enrichment Program" (Kağıtçıbaşı, Bekman and Sunar, 1991) was realized in the form of group discussions on topics designed to increase the mother's sensitivity to the child's social and emotional needs and to help her foster the child's social and personality growth. The program to foster cognitive development was a Turkish translation and adaptation of HIPPY (Home Instruction Program for Preschool Youngsters) developed by the Research Institute of Innovation in Education at Hebrew University, Jerusalem (Lombard, 1994) and formed the cognitively oriented element of the mother training program. The Program consisted of two periods of 30 weeks for 4 and 5 year-old children. It was utilized through group meetings and home visits. The original project lasted four years (1982-1986). The fourth year assessments investigated the short-term effects of the program; six years later a follow-up study was conducted in 1991-1992 to assess the long-term effects. Both short and long term effects have been positive and impressive (Bekman,1990, 1995, 1998; Kağıtçıbaşı, 1991, 1992, 1996, 1997; Kağıtçıbaşı, Bekman and Göksel 1995; Kağıtçıbaşı, Sunar and Bekman, 1988).

Short-term results indicated extensive findings with respect to the context of development (educational, custodial and home care) and mother training (compared with no training). Educational daycare centers were found to be superior to custodial daycare centers and home care for all indicators of cognitive, social, and emotional development as well as school achievement. The same trend was also observed for children who had been exposed to intervention. In all measures of cognitive, social and emotional development children of the trained group exceeded the control group.

The effects of mother training on the mothers were also impressive. The main difference was observed in the area of mother-child interaction. Trained mothers were observed to be more responsive, to use higher levels of verbalization, and to have higher aspirations and expectations for their children. Direct effects on the mothers indicated higher intra-family status within the family and greater optimism for future life.

The findings of the follow-up research indicated better cognitive functioning, higher school grades, better attitudes toward school, and a higher number of children still in school for the group whose mothers were trained. This group also displayed better family relations.

The long-term results related to the mothers reveal that the mother training program had long-term benefits for mother-child interaction and for the mothers themselves. The mothers were observed to form closer relations with their children and provide a more stimulating environment for them. These mothers also had the last word in making decisions at home.

Applications of the home intervention program began even before the completion of the project. An eleven session television series was prepared of the first element which aimed to sensitize the mothers to the overall development of the child. Limited applications followed with funding from various groups, including parent-teacher associations, women's groups and the private sector. Partial and full applications of the mother training program were carried out as a public service mainly in Istanbul. Main developments began with the collaboration of UNICEF and the Ministry of National Education. The first element of the program was adopted into the Adult Education Programs of the Ministry of Education to train child minders.

Since the implementation of the project in 1983, the Mother Enrichment Program that caters to the different needs of target groups in a variety of contexts has been revised thoroughly for application as a program in the community. The most important modification was made in the duration of the program. It was reduced from 60 to 25 weeks. Furthermore, the program no longer targets 4 and 5 year olds, but only 5 years olds since it aims to reach children in the year before they begin formal schooling. Related with these changes a new cognitive training program was developed by the original project team. This cognitive training program which was developed (Kağıtçıbaşı, Bekman, Özkök and Kuşçul, 1991) replaced HIPPY (Lombard 1994) which was used in the original research. Although no change was made with the number of topics in the mother enrichment element, the content was revised and enlarged (Kağıtçıbaşı, Bekman and Sunar 1991; Kağıtçıbaşı, Bekman, Özkök and Kuşçul 1995). A new component: Reproductive Health and Family Planning was added (Balkan,1993; Coşkun, Kızılkaya, Yıldız and Hotun, 1996). The program is now utilized only with weekly group meetings instead of a combination of home visits and group meetings as it was in the original study. The whole Program was then named the Mother-Child Education Program (MOCEP).

It was after these main changes that the program started to become a public program rather than a series of small scale applications. In 1991, a Foundation of a private bank; The Finance Foundation; obtained the copyright of the program and began supporting it financially. During 1991-1993 MOCEP was implemented with the collaboration of the

Finance Foundation, UNICEF and the Ministry of National Education and reached 716 mothers and 1432 mother-child pairs during the two years.

In August 1993 the Mother-Child Education Foundation (MOCEF) was established with the initiative and support of the Finance Foundation. The Mother-Child Education Foundation is a privately funded non-profit organization, and one of it's aims is to deliver the many-sided benefits of the Mother-Child Education Program to mothers and children across Turkey. The stated purpose of the Foundation is to "contribute by means of educational, social, economic, and financial activities to the development of modern Turkey".

After the Establishment of the Mother-Child Education Foundation

From 1993 up to the present MOCEF collaborated mainly with the Ministry of National Education; Apprenticeship and Non-Formal Education General Directorate. The number of provinces in which the Program is applied, and the number of beneficiaries are presented in Table 2.

Besides the Ministry of National Education, MOCEF also collaborated with the General Directorate of Social Welfare and Child Protection Agency of the Prime Minister's Office (SSCPA). Although the number of beneficiaries reached through this collaboration were less than the numbers reached through the collaboration with MONE this has enabled the Program to be implemented on a wider scale. The numbers are shown in Table 2.

TABLE 2

Number of Provinces and Beneficiaries Reached by MOCEP

Education Year	Number of provinces reached		Number of children reached		Number of mother-child pairs reached	
	MONE	SSCPA	MONE	SSCPA	MONE	SSCPA
1993 - 1994	**9**	**2**	**1300**	**55**	**2600**	110
1994 - 1995	11	14	1700	350	3500	700
1995 - 1996	23	9	3628	233	7256	466
1996 - 1997	34	7	5598	252	11196	504
1997 - 1998	52	6	7305	254	14710	508
TOTAL			19531	890	39262	1780

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HOW THE MOTHER-CHILD EDUCATION PROGRAM (MOCEP) WORKS

The Mother-Child Education Program targets both the child and the child's immediate environment rather than only the child. To promote the child's overall development, the mother as the significant person in the child's home context, is targeted. The aim is to foster cognitive and psychosocial development in the home environment. The program is influenced by the ecological approach which underlines the role of the child's environment. Kağıtçıbaşı (1997) on the basis of various reviews, concludes that programs which target both the child and the family have a greater impact than those focusing merely on the child.

The program also aims to promote school readiness by providing cognitive enrichment to children and by creating an environment that will provide optimal psychosocial health and nutritional development. This necessitates fostering the role of the parents in the cognitive, social and emotional development of the child. Child management methods and communication with the child, emotional security and self esteem of the mother, family planning and reproductive health are also targeted in the program. Thus, it is an example of both an adult education and a child development program.

Timing has always been an issue for intervention programs (Campbell and Ramey, 1994; Roberts and Wasik, 1994). There are various contradictory views about duration and start time. Moreover it is believed that there are times that parents are more open to new information due to the period of life they are in. Right before and after birth are accepted as especially good times to introduce support. The Mother-Child Education Program reaches children and parents right before the children start formal schooling. The understanding is such that the mothers will be more receptive to new information during this period.

Different approaches were adopted for the implementation of the different components of the program. For two of the three components, Mother Enrichment and Reproductive Health and Family Planning, a group dynamics approach is found to be more appropriate. The mothers attend group discussions and are expected to carry out group decisions at home. The consequences of these decisions are followed by the group leaders in the following meetings. Thus, it is expected that mothers will be more responsible for the decisions taken and followed by the group since they will feel the support of the group when faced with resistance for the decision taken at home. This process is believed to facilitate more attitude and behavior change than other means of disseminating information which makes the participants passive receivers (Kağıtçıbaşı, 1997).

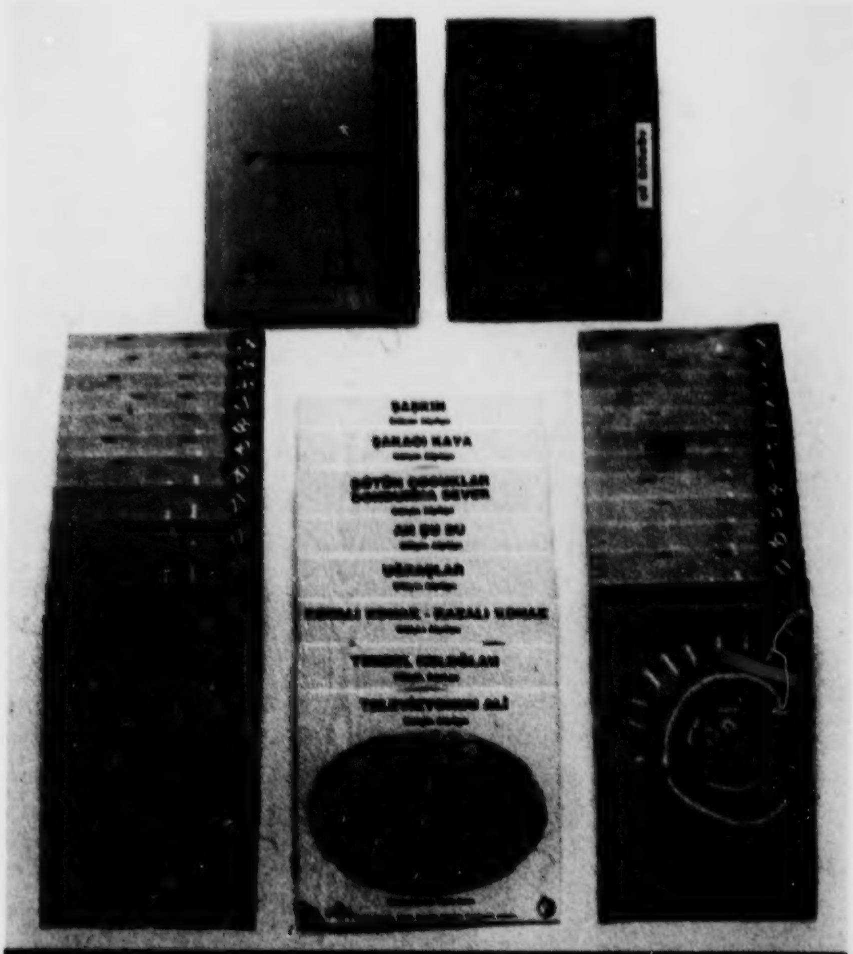
For the Cognitive Training Program, a mediated learning approach is adopted. The aim is to promote school readiness through interaction with an adult who is instructing the child. The mothers therefore become the teachers of their children. They provide scaffolding in order to maximize intellectual competence and growth in the child. They are expected to carry out exercises especially in pre-numeracy and pre-literacy skills with their children. During these exercises, through asking questions, making suggestions, instructing and answering questions, mothers help the child to integrate their developing cognitive skills and create an opportunity to function in their zone of proximal development.

Taking the above developmental considerations as a basis, the Program has three main elements: a Program to foster cognitive development of the child; a Program to sensitize mothers on the overall development of the child; and a Program to sensitize mothers on reproductive health and family planning. It lasts 25 weeks and targets children who are "at risk" due to their environmental conditions.

The Program to Foster the Child's Cognitive Development

The Cognitive Development Program was developed in 1991 by a team (Kağıtçıbaşı, Bekman, Özkök and Kuşçul, 1991; and revised in 1995 (Kağıtçıbaşı, Bekman, Kuşçul, Özkök and Sucuka,1995). The primary aim of this component is to prepare the child for school, by stimulating his pre-literacy and pre-numeracy skills (See Appendix D).

The groups meet weekly in adult education centers and mothers are supplied with 20-25 pages of worksheets. Each week's materials contain various daily exercises to be used by the mother with the child which take about 15 to 20 minutes to complete. Pages are



Samples of the Mother-Child Education Program. Handbook of the Mother Enrichment Program, worksheets of the Cognitive Development Program, story books, Handbook of the Reproductive Health and Family Planning Program.

marked and assigned for each day of the week (1st, 2nd day) to help mothers keep track of the activities for different days. The worksheets get progressively more difficult over time. The exercises are in the various areas of eye-hand coordination, sensory discrimination, pre-literacy (recognition of letters, recognition of the letter sounds) and

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pre numeracy skills (recognition of numbers, addition and subtraction), language development, classification, seriation, concept formation (direction, size, place), learning of colors and shapes, problem solving skills and general ability.

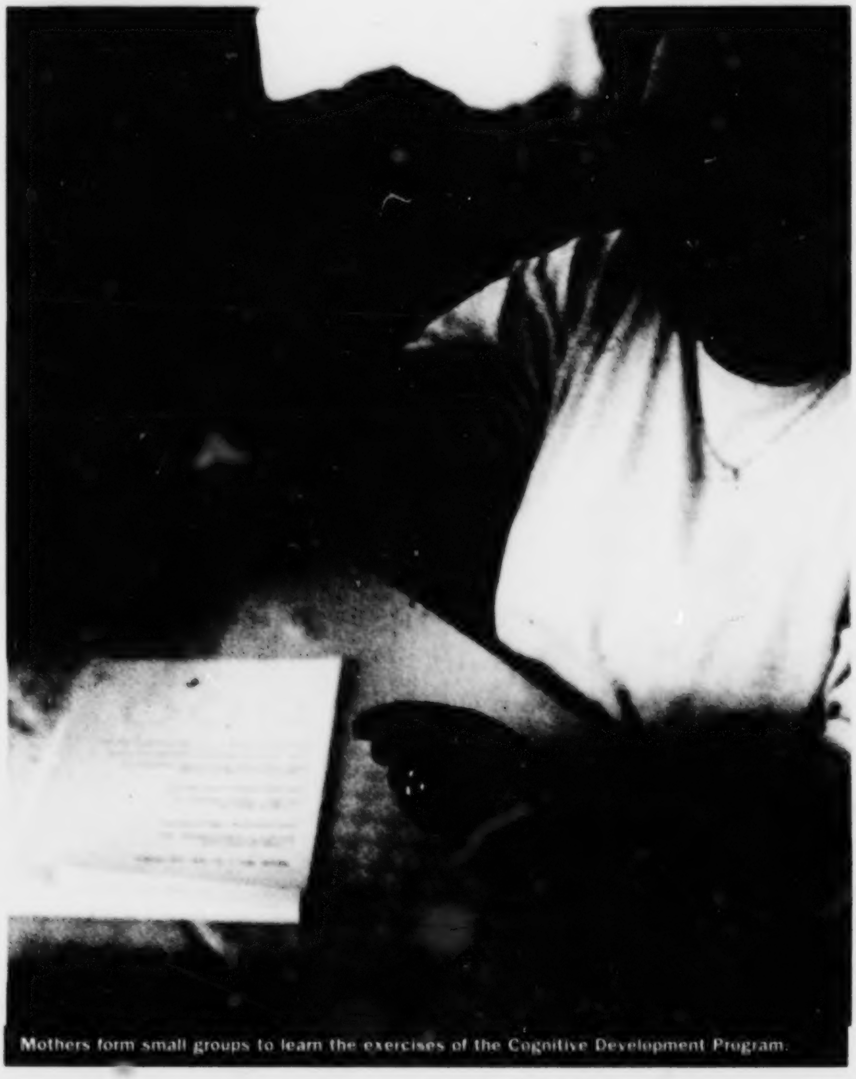
In addition to the worksheets, 8 picture story books (Alpöge,1995) (See Appendix D) are used for training in listening comprehension, verbal description, vocabulary, question-answer activities and reasoning. Interactive shared book reading activities are given particular emphasis because the origins of emergent literacy are thought to be found in early mother-child interaction during activities related with picture books and reading materials. These interactions carry the characteristics of a scaffolding dialogue. Correlation between the frequency of shared book reading and child's language and later reading is well observed (Crane-Thoreson and Dale, 1992; Rowe, 1991).

Mother Enrichment Program

The Mother Enrichment Program was first developed in 1982 (Kağıtçıbaşı, Bekman and Sunar 1991) and then revised in 1995 (Kağıtçıbaşı, Bekman, Özkök and Kuşçul, 1995). It aims to increase the mother's sensitivity to the cognitive, social and emotional development of the child and to aid her in preparing a home environment. In addition it aims to support the parent in creating a consistent and positive mother-child interaction (See Appendix D).

A scene from a group meeting.

The topics of the Mother Enrichment Program include children's health, nutrition and cognitive, social and physical development, creative play activities and importance of play. Topics such as discipline, methods for changing negative behaviors and other facets of



Mothers form small groups to learn the exercises of the Cognitive Development Program.

mother-child interaction and communication are also stressed. Discussions focus on expressing and listening to the feelings of the child and acceptance of the child's feelings. Generalizations are then made to other human relations, including spousal relations. Some meetings are also devoted to the mothers' feelings about being a woman and a mother. Throughout the program, the mothers are encouraged to develop a positive self concept. The group discussions are oriented toward supporting the mothers in developing feelings of competence, efficacy and self confidence.

Reproductive Health and Family Planning Program

For the development of the Reproductive Health and Family Planing Program, MOCEF cooperated with institutions active in the area of family planning. The first program implemented was developed in 1993 (Balkan,1993). Later this was expanded into a new program (Coşkun, Kızılkaya, Yıldız and Hotun,1996). The program contains 23 topics. The first part covers fourteen topics which focus on the importance of reproductive health and the factors that influence it. This part mainly sensitizes the mothers to their reproductive system and how to prevent basic illnesses of this system. This section also defines healthy pregnancy and safe motherhood. The second part mainly discusses the different methods of family planning which are discussed in nine different meetings (See Appendix D).

IMPLEMENTATION OF THE MOTHER-CHILD EDUCATION PROGRAM

During the 25 weeks mothers come to the group meetings once a week in adult education centers which are found in each district of each province. Each group is composed of 20-25 mothers. The meetings are run by adult education teachers who are trained by Mother-Child Education Foundation staff. In the first part of each meeting that week's topic of the Mother Enrichment Program is discussed for an hour and a half. In the group meetings mothers actively participate, ask questions, express opinions, and share ideas and experiences. Following the group discussions, group decisions are taken regarding some course of action to be taken in the home. In the next meeting, the results of the decision are reassessed and, possibly, a new decision is made. Thus, techniques of

A scene from the home. The mother is working with her child and the teacher is observing them.

group dynamics are utilized to enable the mothers to provide their children with greater support for healthy development.

The second part of the meeting is devoted to the discussion of the Reproductive Health and Family Planning Program and lasts fifteen minutes. Here the main aim is to pass information on in the context of a group. This makes it possible for mothers to share their experiences and hear those of others in the area of family planning and reproductive health.

In the last part of the meeting mothers are asked to form groups of five or six to learn the exercises of the Cognitive Development Program through role playing. In each group of mothers there is an aide (one of the mothers) who is responsible for the correct implementation of the program in that small group. The mothers in the groups take turns and role play the activities that they will later carry out with their children. Each mother is given an opportunity to experience the role of the mother and the child. For the implementation at home to be effective extra effort is made to teach the worksheet of that week correctly to the mothers. The whole meeting lasts for about three hours.

Group leaders also conduct home visits to each mother to ensure that the cognitive training program is being implemented appropriately in the home environment with the child and to discuss any problems with the mother. Each mother is visited 5 times throughout the 25 weeks of the program.

DISSEMINATION STRUCTURE OF THE MOTHER-CHILD EDUCATION PROGRAM

In the implementation of the Program there are two levels of staff; teachers and province coordinators who are both MONE personnel. Both are trained by the Foundation staff. Teachers are responsible for the implementation of the Program in the groups and supervision of the Program at home. Thus, as the teachers run the group meetings they also make home visits and observe the mother working with her child.

Teachers are trained by the Foundation staff for four weeks. During the training seminars the teachers learn the basic principles for implementation of the Program and experience the group meeting process through role playing. Here the aim is not only to pass information but also to provide opportunities to live the group process as much as possible.

Province coordinators are responsible for the implementation of the program in each province. They work with a maximum of 8 teachers in their province. They are expected to observe the group meetings and supervise each teacher. Province coordinators are trained by the Foundation staff for five weeks. During the training seminars province coordinators are given information about the content and the implementation of the program. In addition, they are trained through role playing in which they are put into situations similar to those they will experience during implementation and asked to carry out their role as coordinators. They are also given a week to observe the program. Province coordinators are also asked to join the teachers in the last week of teacher training. During this week coordinators are involved in exercises in which they experience their roles as coordinators with the teachers whom they are going to supervise.

Supervision and training of the teachers and province coordinators is done by the regional officers and program consultants who are Foundation staff. Regional officers are responsible for a maximum of 8 provinces in a designated region. They make regular visits to each province and observe the implementation of the program. In addition they have regular meetings with all the province coordinators whom they are responsible for to discuss the implementation process and the problems they may face during the Program. Program consultants are the most experienced personnel and have worked in the Program for 10 to 16 years in various levels from group leader to consultant.

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Evaluation of the Mother-Child Education Program

Although the short- and long-term results of the initial research which investigated the small scale implementation of the Mother Training Program revealed impressive results, it became apparent that there was a need for further research which would assess the effects of the revised program, which was being implemented on a wide scale, both on children and mothers. In addition, the new dissemination structure which enabled the wide scale application of the program needed to be monitored for its effectiveness and efficiency. Since a comprehensive research which investigated the revised program had not been conducted this research made possible the evaluation and monitoring of the program and the dissemination structure.

To validate the impression that the revised program makes a meaningful difference in the lives of children and their families there was a need to investigate both the process and the product of the program. Otherwise it would not be possible to discuss the relevance of this program for the country. Thus the research with its formative component made it possible to study the process as it is, while the summative component, by comparing the two groups, helped to derive cause and effect inferences. While the former made it possible to make practical decisions, the latter with its careful systematic measurement provided generalizations.

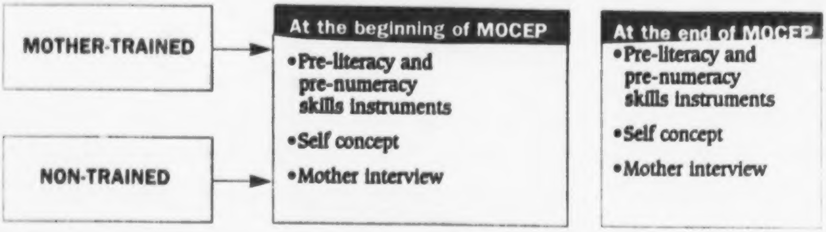
The immediate effects obtained straight after the termination of the program prompted a follow-up of the children in their first year of formal schooling to assess whether or not the gains obtained during the program had resulted in school success. Thus, the evaluation of the program has three main components; immediate effects, effects on initial school success, and adaptation and evaluation of the implementation of the program.

IMMEDIATE EFFECTS OF THE MOTHER-CHILD EDUCATION PROGRAM

Design

The research aimed to study the short term impact of the program on both children and mothers. To realize this aim, a pre, post control group, quasi experimental design was applied. Thus, the children and mothers were assessed on different variables both before the program started and after it ended. The time elapsed between the two assessments was eight months (See Table 3).

TABLE 3
DESIGN OF THE STUDY


MOTHER-TRAINED
NON-TRAINED
At the beginning of MOCEP
•Pre-literacy and pre-numeracy skills instruments
•Self concept
•Mother interview
At the end of MOCEP
•Pre-literacy and pre-numeracy skills instruments
•Self concept
•Mother interview

Sample

The sample was chosen from four different provinces of the country. An attempt was made to include provinces from different geographical regions in which the program was being implemented at that time. The Aegean, Trachea, Central Anatolia and South East Anatolia regions were the geographical regions represented in the sample. In addition to geographical representation, the size of the provinces was also a factor considered in selection of the sample. Thus, two large and two small cities were included in the sample. The children and the mothers were chosen from four different program sites in each of the four provinces. Thus, the data was collected from sixteen program sites. Groups consisting of comparable mother-child pairs who did not attend the program were chosen

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TABLE 4
SAMPLE OF THE STUDY

MOTHER TRAINED	102
NON-TRAINED	115
TOTAL	217

in the same sites. To have a comparable group with similar characteristics, criteria like the education and occupation levels of the mothers and fathers, and housing conditions were kept similar. In total, there were 102 experimental and 115 control mother and child pairs in the study (See Table 4). The sample represented not only different provinces but also different sites in a province.

Instruments

To assess the effect of the program on children, pre-literacy and pre-numeracy skills were measured in the cognitive domain. The instruments which measured these pre-

TABLE 5

PRE LITERACY SKILLS	PRE-NUMERACY SKILLS
• VISUAL RECOGNITION	• RECOGNITION OF SHAPES
• VISUAL DISCRIMINATION	• COUNTING
• SEQUENTIAL KNOWLEDGE	• VISUAL MATCHING
• ABILITY TO FOLLOW VERBAL DIRECTION	• AWARENESS OF CORRESPONDENCE
• PENCIL CONTROL	• AUDITORY ATTENTION
• CAPACITY TO COPY LETTERS	• VISUAL COUNTING
• VISUAL ATTENTION	• SEQUENTIAL COUNTING
• RECOGNITION OF LETTERS	• KNOWLEDGE OF NUMBERS
• VISUAL RETRIEVAL	• VISUAL RECOGNITION AND DISCRIMINATION OF NUMBERS
• SYNTAX MEMORY	• ADDITION
• SPATIAL CONCEPTS	• SUBTRACTION
• KNOWLEDGE OF PREPOSITIONS	
• VISUAL MEMORY	
• DISCRIMINATION BY CATEGORY	
• LISTENING COMPREHENSION	

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literacy and pre-numeracy skills aimed to assess those skills which are important for learning how to read and write and do mathematics in primary school. A list of the skills in both instruments are shown in Table 5. The range of the scores on the Pre-literacy Skills Instrument was between 0-167 and on the Pre-numeracy Skills Instrument it was between 0-149. Internal reliability was obtained for both instruments before use. While the reliability score for Pre-literacy Instrument was .87 the reliability score for Pre-numeracy Instrument was.89.

In the area of social development, "Pictorial Scale on Perceived Competence and Acceptance for Young Children" scale developed by Harter (1984) was used for assessment. After the instrument was translated into Turkish and back translated a reliability study was conducted and a reliability coefficient of .82 was obtained. The scale had mainly four domains; Physical Competence, Cognitive Competence, Mother Acceptance and Peer Acceptance. The range of the scores was between 1-4 .

The effectiveness of the program on mothers was measured by an interview which consisted of questions on demographic characteristics, child rearing attitudes and the personal and family network of social relations prevalent in the family. In addition the interview included questions which were later used to constitute two different scales. The Self Esteem scale was constituted from questions about the mother's perception of herself as an individual, as a mother and as a housewife in comparison to others. The Woman's Status in the Family scale tapped her role in decision making on issues such as number of children, buying an expensive item, child discipline and the like. Reliability studies were conducted for both scales. The reliability score for the Self Esteem scale was .79 and for the Woman's Status in the Family scale it was .64.

Procedure

The preparation phase of the research took nearly a year. A good part of this phase was allocated to the development of the instruments to measure pre-literacy and pre-numeracy skills and the interview. After the development of the instruments various pilot tests were conducted and reliability studies were carried out on the final stage of the instruments. The research started with the selection of the sample. An attempt was made to start the assessments for the mother training group before the program started. The assessments of the non trained group were conducted after the completion of the assessments of the trained group. The assessments were conducted on both children and their mothers at the beginning and the end of the Mother-Child Education Program. Both assessments lasted one and a half months each.

Analysis

For all the measures which assessed the effects of the program on children change scores were obtained for both the experimental and control groups. The main analyses consisted of the comparison of these change scores with t tests.

Similarly, difference scores were obtained for the mother interviews which assessed the effects of the program both on mother-child interactions and on mothers. For the categorical items, the comparisons between the two groups were done on the post test results only. Of this categorical data only those items which didn't display a significant difference between groups in the pre test but showed a difference in the post test will be reported.

Further, multiple regression analyses were carried out for some of the variables.

Results

Description of the Sample

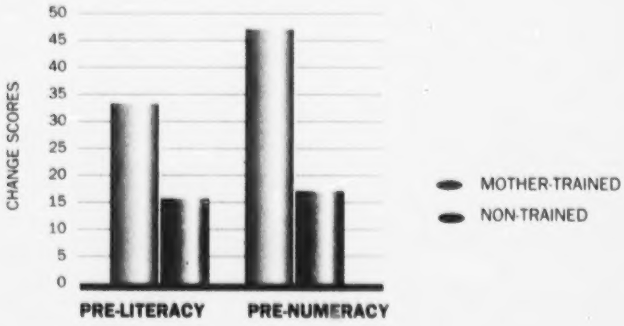
While the majority of mothers (37.2%) were between 27-30 years of age, the majority of fathers (35.4 %) were between 31-34 years of age. The education level of the sample was generally low, as can be expected from a low socioeconomic status population. The majority of both the mothers and the fathers were elementary school graduates (mothers 66%, fathers 50%.) Most of the families had two children (52%) and lived in apartment houses (60.4%). The households in the sample had either 4 (48%) or 5 people (45%). Nearly all the mothers (92%) in the study were housewives. More than half of the fathers were semi-skilled (27%) or skilled (28%) workers. Of the whole sample 44% of the mothers were of city origin. The rest were born either in a rural village (34%)or in a small town (17%).

Effects on Children

Pre-literacy and Pre-Numeracy Skills

The analyses which illustrated the effects of the program on children revealed significant results both for pre-literacy and pre-numeracy skills. When the change scores (pre-post difference) of the mother trained and non trained groups were compared, significant differences were found for both pre-literacy and pre-numeracy skills. The mean change score of the pre-literacy skills instrument of the mother trained group was significantly higher than the mean change score of the non trained group (33.40 vs 15.58, t(215) = 6.89, p=.000). A similar outcome was obtained for the pre-numeracy skill; the mean change score of the mother trained group was significantly higher than that of the non trained group (47.24 vs. 16.89, t (179)=8.41, p=.000). For both outcomes see Figure 1 and Appendix A ; Table A.1.

FIGURE 1
PRE-LITERACY AND NUMERACY SCORES



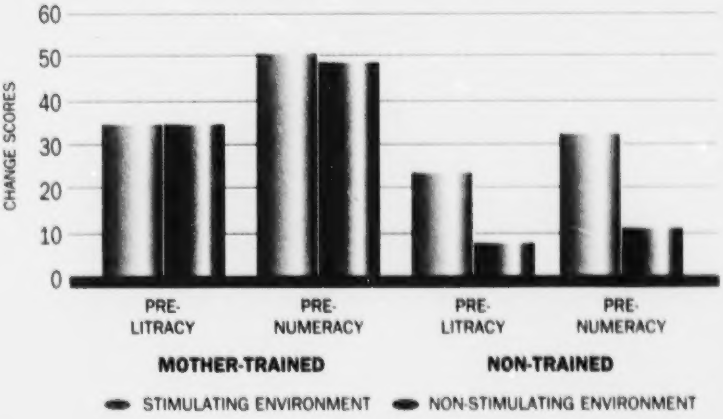
The content of the pre-literacy and pre-numeracy skills instrument was similar to the content of the Cognitive Development component of the program which incorporates exercises to prepare the child for school by enhancing his/her cognitive capacity. The results which indicated a significant increase in the performance of the trained group with respect to both skills very clearly illustrated the fact that the program was successful in reaching its main aim in that children who had participated in the program were found to attain those skills which will form the basis for the three R's when they start elementary school. Thus, they were more prepared to deal with the expectations of formal schooling than their counterparts who had not been in the program.

Environmental Differences

Furthermore, when the mean change scores of the pre-literacy and pre-numeracy skills of both groups were compared with respect to an environmental stimulaton index, significant differences between the two groups were obtained. The environmental index aimed to identify the home environment of the child with respect to its stimulation level. The variables included in the index were the education level of the mother and father, number and type of toys present at home, the frequency of buying newspapers, magazines, watching TV and the intensity of mother-child interaction. Thus, the stimulation level of the child's environment was divided into three levels; high, low and medium stimulation. The children from the two groups (trained and non trained) who fall in the high and low stimulation levels were compared in terms of their pre-literacy and numeracy mean change

FIGURE 2

PRE-LITERACY AND PRE-NUMERACY SCORES WITH RESPECT TO THE ENVIRONMENTAL STIMULATION INDEX



scores. The results indicated a distinct difference for the two groups. Children in the non trained group who come from the stimulating environments had significantly higher pre-literacy (24 vs 8.85, t(71)=3.85, p=.000) and pre-numeracy mean change scores (23.32 vs.10.85, t(70)=2.65, p=.010) than the children coming from the low stimulating environments of the same group. On the other hand for the mother trained group no significant differences were obtained between the children coming from stimulating and non stimulating environments in terms of pre-literacy and pre-numeracy mean change scores. Moreover, the children of the mother trained group of different environments (stimulating and non stimulating) had significantly higher mean change scores for both skills than the children from the non trained group from a stimulating environment. These findings indicate the fact that the program is able to overcome the distressing effects of disadvantaged environments and show the importance of early intervention for a fair start at school (See Figure 2 and Appendix A; Table A.2).

Gender Differences

When the mean change scores for pre-literacy and pre-numeracy skills for the mother trained group were compared with respect to gender, girls were found to have a higher

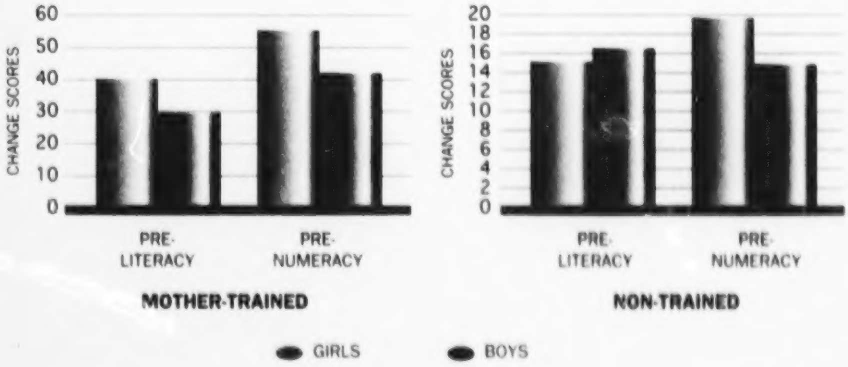


FIGURE 3

PRE-LITERACY AND NUMERACY SCORES WITH RESPECT TO GENDER DIFFERENCES

mean change score than boys in pre-literacy skills (38.77 vs 29.22, t(101) =2.43, p=.02) and for the pre-numeracy skills (54.93 vs 41.27, t(101) =2.30, p=.023 (See Figure 3 and Appendix A; Table A2). The same trend was not found for the non trained group. The results indicate that the girls gained more from the program than boys. This may be due to the fact that girls started the program at a lower level on these skills than the boys. in addition the difference obtained only for the trained group illustrate the fact that when a chance is given the initial inequality of gender differences might be overcomed.

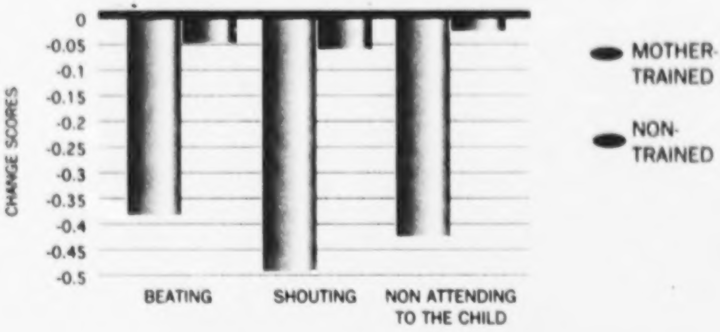
Effects on Mother-Child Interaction (Child Rearing Practices)

The change in mother child interaction was tapped by comparing the self reports of the mothers about their child rearing practices before and after the program. These self reports investigated both the different ways of discipline used by the mother and their possible behaviors in certain situations.

When the percentage of indulgence mothers displayed in positive and negative discipline methods was investigated the trend indicated a significant decrease for the negative methods of discipline in the trained group as compared to the non-trained group.

FIGURE 4

NEGATIVE CHILD REARING PRACTICES OF MOTHERS

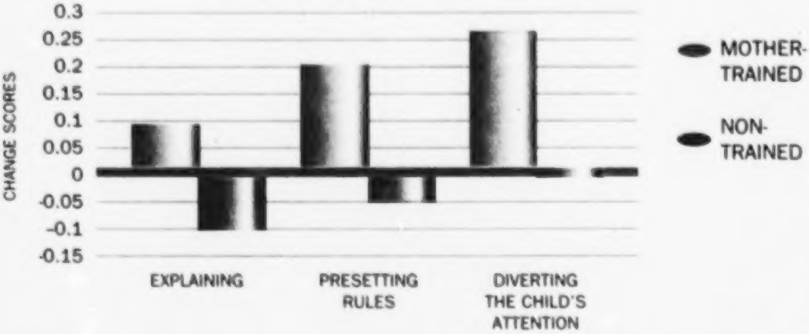


The mothers of the trained group reported that they beat their children significantly less than the non trained group. The mean change score for the trained group was -.3832 and for the non trained group it was -.0431. This difference was significant (t (221)=2.94, p=.004) (See Figure 4 and Appendix A; Table A.3).

The same trend is observed for the other negative methods of discipline such as; shouting at the child or not attending to him/her when s/he engages in unwanted behavior. A significant difference was obtained when the mean change scores of the two groups "shouting at the child" were compared. The trained mothers reported significantly less shouting than the non trained mothers t(221) =2.90,p=.004. The mean change score for the trained group was (-.4953) and for the non trained group it was (-.0603). The trained mothers reported that they also decreased their nonattentive behavior (-.4206) significantly more than the non trained mothers (-.0172) (t(221) =3.35, p=.001) (See Figure 4 and Appendix A; Table A.3).

FIGURE 5

POSITIVE CHILD REARING PRACTICES OF MOTHERS



It was found that not only were the trained mothers lessening their use of negative discipline methods but they were also practicing more positive methods. They were found to engage significantly more in behaviors like explaining why his/her behavior is wrong to the child, setting up rules of behavior beforehand, and distracting the child's attention to something else when involved in unwanted behavior (See Figure 5 and Appendix A; Table A.3).

When the mothers were asked what happened when something came up to prevent them from keeping their promise to child, more of the trained mothers reported that they kept their promise (40% vs 23%, X^2 (3,N= 217)=10.87, p= .012) as compared to the non trained mothers. The percentage of other behaviors such as not keeping the promise, delaying the promise for a certain time or delaying for an indefinite period of time were higher for the non trained group of mothers (See Figure 7 and Appendix A; Table A.3).

FIGURE 7
KEEPING THE PROMISE GIVEN TO THE CHILD

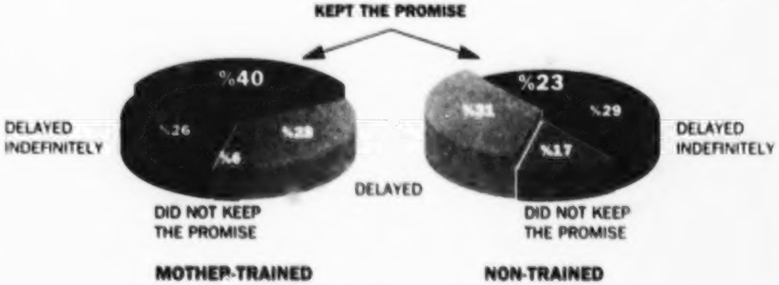
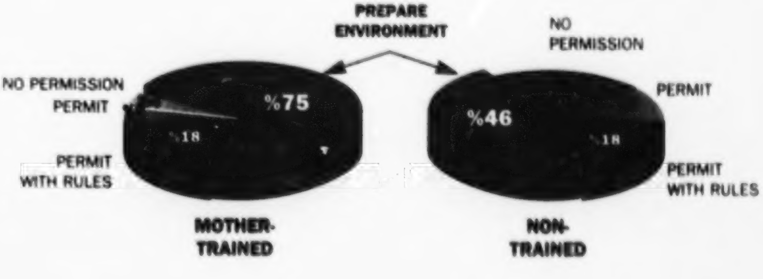


FIGURE 8
PERMITTING PLAY WITH MATERIALS WHICH MAY MESS UP THE HOUSE



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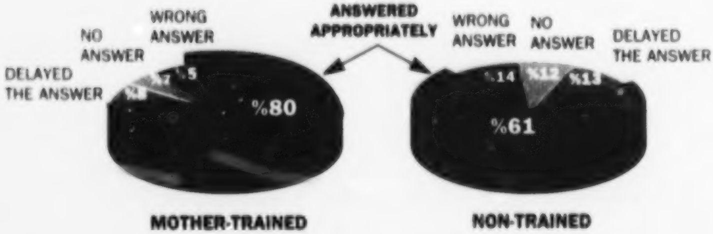
When separate analyses for each behavior was carried out, it was found that the mean change score for explaining reasons of wrong behavior was significantly higher for the trained group (.0841) than the non trained group (-.1034), t(221) =2.09, p=.038.). The same trend was also found for setting up rules of behavior. While the trained group increased their behavior with a change score of (.1963) a negative change was observed for the non trained group (-.0517), t(221) =4.15, p=.000). For diverting the child's attention to something else, while the mean change score for the trained group was .2617, no change was observed for the non trained group (.000), t(221) =2.97, p=.003).

Mothers were asked various questions related to their child rearing practices both at the beginning and end of the program. These questions mainly tapped the behaviors of mothers in different situations which they experienced with their children: what they do when the child breaks a glass or does not tidy up his room. When the pre and post test differences about these child rearing practices were investigated the mothers who had attended the training program were found to differ from those who hadn't, in the following items. A significant difference was observed for the item concerning the mother's reaction when the child asks a difficult question. A higher number of mothers who had been in the program reported that they answer the question appropriately (80% vs 61 %, $X^2(3,N=217) =10.33$, $p=.035$) as compared to those who hadn't. In addition, the percentages of giving a wrong answer, no answer and delaying the answer were higher for the non trained group than the trained group (See Figure 6 and Appendix A; Table A.3).

FIGURE 6

ANSWERING THE QUESTIONS OF CHILDREN



The mothers were also found to differ in terms of their response to the child's desire to play with materials which may mess up the house. A significantly higher number of the trained mothers stated that they prepare an environment which allows the child to play, as compared to the non-trained mothers (75 % vs 46 %, X^2 (3, N=217) = 28.20, p=.000). The percentage of those who answered "I do not give permission at all" was higher for the non trained group than the trained group (See Figure 8 and Appendix A; Table A.3).

The above findings indicate a positive change in the child rearing practices of mothers in the trained group. The change reflects the presence of certain mother-child interactions which lead to more adequate growth and development of children. Also the results indicate an improvement in the relations between mother and child, and the coming about of an environment for healthy child development. Thus one sees illustrated here the positive impact of the Mother Enrichment component of the program which aims to empower the mothers concerning the whole development of the child. Moreover, the results indicate the fact that the messages which the mother training program aims to impart were well received by mothers who participated in the mother training program.

Although the results indicated the main effects of the program on the child rearing attitudes of the mothers, an attempt was made to observe the relation between variables other than the program and the outcome measures. Accordingly, multiple regression analyses were carried out in order to portray more fully the process and relations reflected in the outcome for the trained group.

With the multiple regression analyses, the different child rearing attitudes of mothers were considered as outcome variables which might have a relation with variables other than the training. The outcome obtained in these analyses gave insight to the understanding on for whom the program is most effective. When the variables like environmental stimulation index, mean score of the observations for the group discussion part of the program, change score for the self esteem of the mothers, change score for the status of the mother in the family and change score for social support the mother receives are considered as variables which might have a relation with the child rearing behaviors of the mothers, behaviors like punishing the child, giving alternatives to the child, attending to the child when there is a need and explaining to the child, were thus found to be related by one of the variables mentioned above. As illustrated in Appendix A; Table A.4 the change score of punishing the child was found to have a negative relation to the mother's family status change score. As the change score between the pre and post test measures for the mother's family status got larger (better family status) the change score for the punishment behavior got smaller (less punishing behavior). Thus, when the mother had better status in the family, she lessened the negative discipline methods (punishing the child) which she applies. (For change score see Appendix A; Table A.10)

On the other hand, another negative child rearing behavior of the mother: not attending to the child, was found to be negatively related with the mean observation score for the group discussion (See Appendix A; Table A5 and Table A.10). As the group discussions mean score gets higher (group discussion is conducted as it should be) the mother is less likely not to attend to the child when there is a need. Thus, when the implementation of the program is what it should be, mothers are seen to change their negative discipline methods more. Thus it can be stated that a relation between the process and the outcome variables is observed.

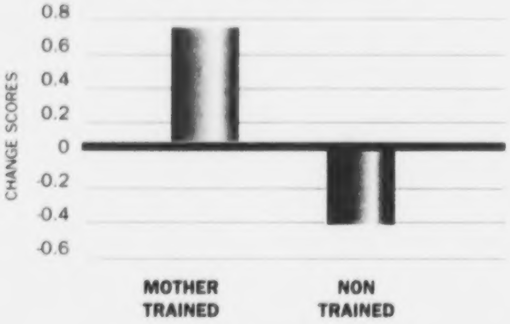
Another behavior of the mother: explaining to the child was found to be positively related to the change score of the mother's self esteem and negatively related to the environmental stimulation index (See Appendix A; Table A.6) in that, as the mother's self esteem change score increased (self esteem increased), the change score for the behavior of explaining to the child increased (more explaining behavior). As the self esteem of the mothers improved they were found to explain matters to the child. On the other hand as the environment of the child got less stimulating the mothers were found to involve more in the behavior of explaining to the child. These results indicate that the mothers from less stimulating environments change their behaviors more than the mothers from more stimulating environments after the program. For change scores see Appendix A; Table A.10.

A similar outcome is obtained for the mother's behavior of providing alternatives to the child when the child is involved in an unwanted behavior. The environmental stimulation level was found to be negatively related to the behavior of providing alternatives to the child (See Appendix A; Table A.7 and A.10). As the stimulation index score was lower the change in the mother for the behavior of providing alternatives was found to increase in that they gave more alternatives to their children. Thus, results obtained for both variables of providing alternatives and explaining to the child illustrate the fact that mothers who are in the program with less stimulating environments are more prone to change positively in their child rearing attitudes.

Effects on Mothers

An attempt was made to observe any effects of the program on mothers themselves. The self reports of the mothers indicated that the mothers who have been in training perceive themselves as better mothers, wives and individuals when they compare themselves with their acquaintances. This difference is reflected in the significant difference between the two groups (.71 vs -.44, t(221) = 2.62, p= .01) on this variable (See Figure 9).

FIGURE 9
SELF ESTEEM OF THE MOTHERS



When the effects of variables other than the program per se on the mother's self esteem were analyzed by multiple regression analyses observation mean scores for the group discussion component of the program were found to be related to the mother's self esteem. As indicated in Appendix A; Table A.8 the mean score for the group discussions had a positive relation to mothers' self esteem. Mothers who attended group discussions with high mean scores (better implementation) were found to have better self esteem. This indicates a close relation between the quality of the implementation and the direction of change obtained in the mothers. Interestingly, a negative relation was obtained between the mother's status in the family and the social support the mother receives. When the mother's status in the family changed positively the support she received decreased and vice versa (See Appendix A; Table A. 9 and Table A. 10).

EFFECTS ON INITIAL SCHOOL SUCCESS AND ADAPTATION

The evaluation research of the Mother-Child Education Program indicates that the Program is effective in developing skills for formal schooling. In addition, the results have revealed differences in the child rearing attitudes and practices of mothers who are exposed to the Program. This revealed the need for research to find out whether the chain of interrelated effects deriving from the Mother-Child Education Program develop into a positive cycle. More specifically, the follow-up research aimed to illustrate if an early enrichment program providing the child with school readiness skills enables the child to start ahead and enjoy initial success at primary school. Thus, the present section aims to cover the results which illustrate whether the acquisition of skills necessary for school success give an effective start at school and whether the changes obtained with respect to the presence of a stimulating environment leads to school success or not.

Sample

The same sample of the original study was reached in the follow-up research which investigated school success. Among the original sample all who had started school were included in the study. Twenty five children did not start school, 13 families could not be

TABLE 6
SAMPLE OF THE FOLLOW - UP STUDY

MOTHER-TRAINED	85
NON-TRAINED	92
TOTAL	177

reached and 3 dropped out. In total, there were 85 experimental and 92 control mother child pairs in the study (See Table 6).

Instruments

To assess the effect of the program on the children's primary school success, literacy and numeracy skills were measured by an instrument developed by the research team. The list of skills in both instruments are shown in Table 7 . The range of scores on the Literacy Skills Instrument was between 0-148 and on the Numeracy Skills Instrument it was between 3-134. Internal reliability was obtained for both instruments before use. While the reliability coefficient for the Literacy Instrument was .64, the reliability coefficient for Numeracy Instrument was .77

TABLE 7

PRE LITERACY SKILLS	PRE NUMERACY SKILLS
• VISUAL RECOGNITION	• RECOGNITION OF SHAPES
• VISUAL DISCRIMINATION	• COUNTING
• SEQUENTIAL KNOWLEDGE	• VISUAL MATCHING
• ABILITY TO FOLLOW VERBAL DIRECTION	• AWARENESS OF CORRESPONDENCE
• PENCIL CONTROL	• AUDITORY ATTENTION
• CAPACITY TO COPY LETTERS	• VISUAL COUNTING
• VISUAL ATTENTION	• SEQUENTIAL COUNTING
• RECOGNITION OF LETTERS	• KNOWLEDGE OF NUMBERS
• VISUAL RETRIEVAL	• VISUAL RECOGNITION AND DISCRIMINATION OF NUMBERS
• SYNTAX MEMORY	• ADDITION
• SPATIAL CONCEPTS	• SUBTRACTION
• KNOWLEDGE OF PREPOSITIONS	
• VISUAL MEMORY	
• DISCRIMINATION BY CATEGORY	
• LISTENING COMPREHENSION	

In the area of social development the "Pictorial Scale on Perceived Competence and Acceptance for Young Children 1st and 2nd grades" scale developed by Harter (1984) was used for assessment. After the instrument was translated into Turkish and back translated a reliability study was conducted and a reliability coefficient of .86 was obtained. The scale has four main domains; Cognitive Competence, Peer Acceptance, Physical Competence and Mother Acceptance. The range of the scores was between 1-4.

The effectiveness of the program on mothers was measured by an interview which included questions on child rearing attitudes, child's study habits, mothers interest in the child's academic life, mothers satisfaction with the child's school life and mothers self esteem. Some of the interview questions were used to constitute two different scales. The Self Esteem scale had questions about the mother's perception of herself as an individual, as a mother and as a housewife in comparison to others. The Mother's Perception of the Child scale tapped her satisfaction with the child's school success, relationships with friends, general attitudes and teachers' satisfaction with the the child. The reliability score for the Self Esteem scale was .57 and for the Mother's Perception of the Child scale.76.

In addition to the above assessments an interview was used to obtain the teachers' evaluation of the child with respect to his/her school life and school success. The interview included questions which tried to assess the teacher's evaluation of the children in social and cognitive domains and to understand the nature of the teaching environment present in class.

Two different scales were developed from the questions in the teacher interview; Teachers Evaluation of the Child's Cognitive Skills scale and Teachers' Evaluation of the Child's Personality Characteristics scale. Evaluation of the Child's Cognitive Skills scale aimed to obtain the teachers evaluation about the child's cognitive characteristics such as success in class, participation in class, child's curiosity, creativity, whether the child likes to explore things, is s/he interested in learning, is s/he attentive, does s/he know his responsibilities. The reliability score for the Evaluation of the Child's Cognitive Scale was .96. Evaluation of the Personality Characteristics scale had items which tried to measure the teacher's perception of how much the child is willing to share, whether the child is independent or not, whether her/his friends listen to her/him, whether s/he keeps his promises and whether s/he is loving and caring to others. The reliability score for this scale was found to be .91.

The teacher form of Harter's "Pictorial Scale of Perceived Competence and Acceptance for Young Children ,1st and 2nd grades" was used to assess the teacher's perception of the child's Cognitive Competence, Physical Competence and Peer Acceptance. A reliability study was conducted after the translation of the instrument and the reliability coefficient was found to be .95.

Procedure

A good period of time was spent developing instruments, translating some of the instruments and running reliability studies for all. The data collection started at the end of the academic year. Since the data collection incorporated children, their mothers and teachers, it was gathered at different times. The data from the children and the mothers was collected at home and the data from the teachers was collected at school.

The homes of the children were visited twice. In the first visit the Literacy and Numeracy Instrument was applied to the child and the mother was intervieweved simultaneously. In the second visit only the Perceived Self Competence Test was applied to the child. Data from the teachers was collected once. The interview and the teacher form of the Perceived Self Competence test were applied one after another. In addition to these, the child's "starts reading" date was also obtained from the teachers during the school visits.

Separate visits were made to schools to obtain report card grades of each child.

Analysis

T test analyses were used for all the measures which assessed the effects of the program on children. This made it possible to see the differences between the mother trained and non trained children at the end of their first year of elementary school on various variables.

Similarly, the effects of the program on mothers were assessed either by t test or chi square analyses. In this various variables were compared for trained and non trained mothers.

To find the differences between the children of trained and non trained groups in the teachers' evaluations, teachers self reports on various factors were compared.

To find the relations between various variables, multiple regression and path analyses were carried out.

Results

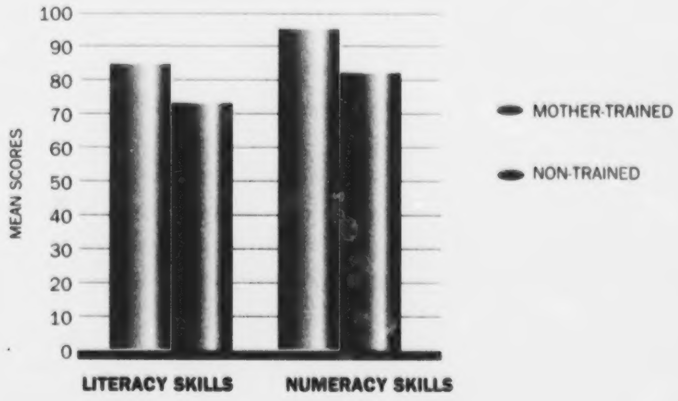
Effects on Children

Literacy and Numeracy Skills

The analyses which illustrated the effects of the program on children revealed significant results both for literacy and numeracy skills. The mean score of the literacy skills instrument for the mother trained group was significantly higher than the mean score for the non trained group of children (84.73 vs 73.69, t(169) =2.99,p=.003). A similar outcome was obtained for the numeracy skills instrument; the mean score for the trained group was significantly higher than for the non trained group (94.94 vs.82.78, t(173) =3.15, p=.002). For both outcomes see Figure 10 and Appendix B; Table B.1.

The results which indicate a significant difference in the performance of the trained group with respect to both skills very clearly illustrate the fact that the positive effects of the program on the cognitive development of the child continued for a year after the termination of the program. As these children were better in pre-literacy and numeracy skills, they were also better, than those who had not participated in the program in the literacy and numeracy skills at elementary school level.

FIGURE 10
LITERACY AND NUMERACY SKILLS



When the reasons for the differences obtained in the literacy and numeracy skills of trained and non trained groups were examined by multiple regression analysis the results helped to illustrate the chain of effects which worked for the obtained outcome.

As Table B. 2 in Appendix B indicates, when the variables which have a relation with the total score for the literacy and numeracy skills obtained at the end of the first year of schooling were examined, mother training and teacher's perception of the cognitive characteristics of children were found to be important. That is, the total score of literacy and numeracy skills of children were related positively to participation in the mother training and to the teachers perception of their cognitive skills. Those children whose mothers had participated in the program and whose teachers had perceived them as having high cognitive characteristics, had higher total literacy and numeracy scores.

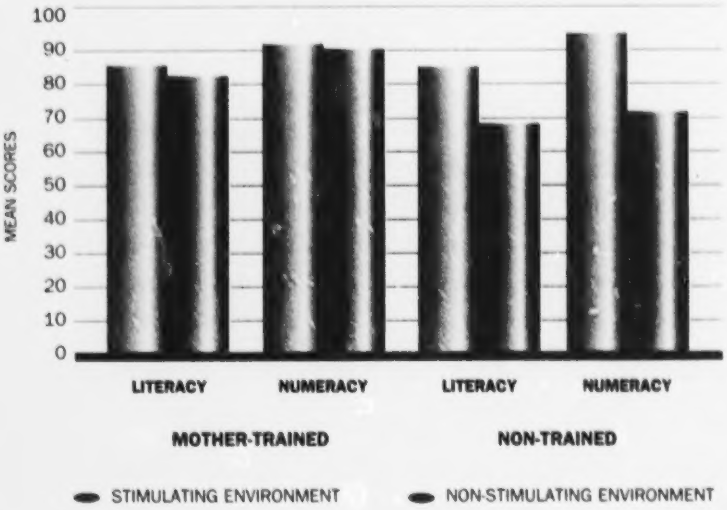
When the literacy and numeracy scores were examined separately by multiple regression analyses, interestingly, both outcomes were observed to be related to the pre-literacy score obtained at the end of training (See Appendix B; Tables B. 3 &B. 4). Although variables like pre-literacy and pre-numeracy scores obtained before training, pre-numeracy scores obtained after training and the mother training were considered as possible variables which could be related to the outcomes, the pre-literacy score after the training was the variable found to be significant. Since the pre-literacy score obtained after the training is found to have a relation to the final literacy score the importance of training on the basic skills for school success and the carrying effects of the intervention in the early ages to the school years are well documented. Moreover, the positive relation between the pre-literacy score obtained after the training and the numeracy score at the end of the first year of schooling puts forth the importance of literacy skills in initial school success.

Environmental Differences

When the literacy and numeracy scores of both groups were compared with the environmental stimulation index significant differences between the two groups were obtained. The environmental index aimed to identify the home environment of the child with respect to its stimulation level. The variables included in the index were education levels of the mother and the father, number and type of toys present at home, the

FIGURE 11

DIFFERENCES ACCORDING TO ENVIRONMENTAL STIMULATION INDEX

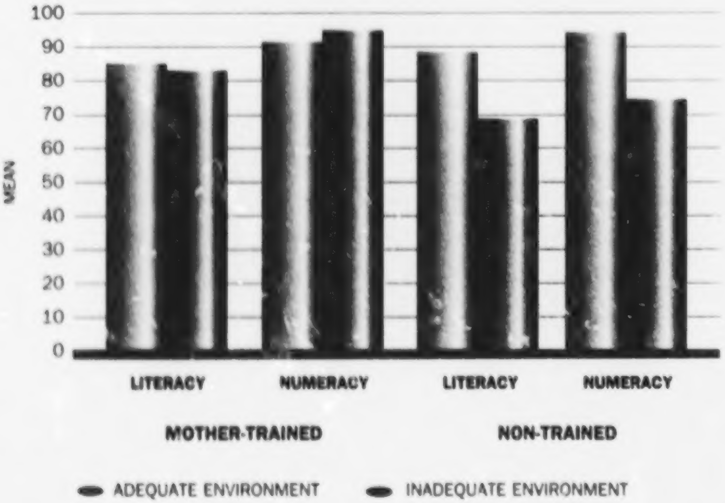


frequency of buying newspapers, magazines and watching TV and the intensity of the mother-child interaction. Thus, the environment of the children were divided into three levels; high, low and medium stimulation. The children from two groups (mother trained and non trained) who fall in the high and low stimulation levels were compared for the two skills. Children in the non trained group who come from the stimulating environments had significantly higher literacy (85.33 vs. 67.41, t(51)= 2.72, p=.009) and numeracy scores (94.33 vs 71.10, t=(51)=3.12, p=.003) than the children coming from low stimulating environments of the same group. On the other hand for the mother trained group there were no significant differences between the children coming from stimulating and non stimulating environments for the literacy and numeracy scores (See Figure 11 and Appendix B; Table B.5).

Differences due to the Study Environment at Home

In addition to the environmental index an attempt was made to evaluate the adequacy of the home environment for studying. Thus, variables like place of study, presence of TV

FIGURE 12
DIFFERENCES ACCORDING TO STUDY ENVIRONMENT AT HOME



and other people in this place, whether other people are present when the child is doing homework and the reactions of the child to these people were included in the home environment index. The study environment at home for each child was divided into two levels; adequate and inadequate. The children from the mother trained and non trained groups who fell into adequate and inadequate environments were compared in terms of their literacy and numeracy scores. While no significant differences were obtained between the children coming from adequate and unadequate study environments in the mother trained group, significant differences were found for the non trained group. Children in the non trained group who come from adequate environments had significantly higher literacy (87.74 vs 68.70, t (58)= 3.28, p=.002) and numeracy (94.44 vs. 75.34, t(59)=2.84, p=.006) scores than children coming from inadequate study environments (See Figure 12 and Appendix B; Table B. 5).

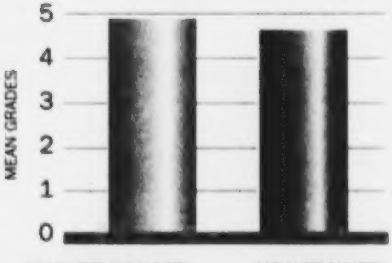
While the above two findings indicate that the program is able to overcome the distressing effects of their environments, they also show the importance of early intervention programs in overcoming these effects. The similar level of success obtained for children from stimulating and non stimulating environments of trained groups in literacy and numeracy skills is the continuation of an effect obtained in the initial results. This is an important finding which illustrates how initial gains obtained in the early ages effect success in the first year of schooling.

Further multiple regression analyses confirms very clearly the importance of the program on school success of children. When the relation between the total literacy and numeracy scores and the mother training in the inadequate study environment was analyzed, a positive relation was found with the training. Thus, the literacy and numeracy scores were found to be positively related to the training in the inadequate study environment (See Appendix B; Table B.6). This brings further explanation to the similar literacy and numeracy scores obtained in the adequate and inadequate study environments for the trained group and it can be stated that it was the training which created this outcome.

Average Grades

The first grade report cards of children indicated significant differences for the first year average grades of the mother trained and non trained groups of children. The average grades of the trained group were significantly higher than the non trained group (4.80 vs. 4.64, t (167) = 2.99, p=.023). For the outcome see Figure 13 and Appendix B; Table B.1).

FIGURE 13
AVERAGE GRADES (out of 5)

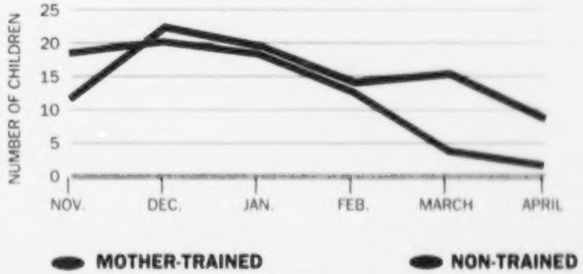


When the relation between average grades and variables like teacher's perception of personality characteristics of children, self esteem of the mother, cognitive environment in the classroom, problems of child in the school, study environment at home and mother's satisfaction with the child were examined with multiple regression analyses, the variables of mother training and teacher's perception of the cognitive characteristics were found to be significantly related. The average grade was positively affected by mother training and perception of the teacher (See Appendix B; Table B.7). If the children were in the training group and perceived by the teacher as having cognitively better characteristics, they had better average grades.

"Starts Reading" Date

As an indication of school success the date at which each child started to read was obtained and compared. The data indicated that the children of the mother trained group began to read significantly earlier than the non trained group of children (X^2 (8,N= 168)= 20.86, p= .008). The "Starts reading" date and the percentages of children who fall into different time periods are illustrated in Figure 14 and Appendix B; Table B.8. Better average grades and early reading for the trained group indicated the fact that those children who acquired skills which prepared them for formal schooling had an effective start at school entry and had academic success in the first year of elementary school. These findings illustrate that the program was successful in reaching its primary aim.

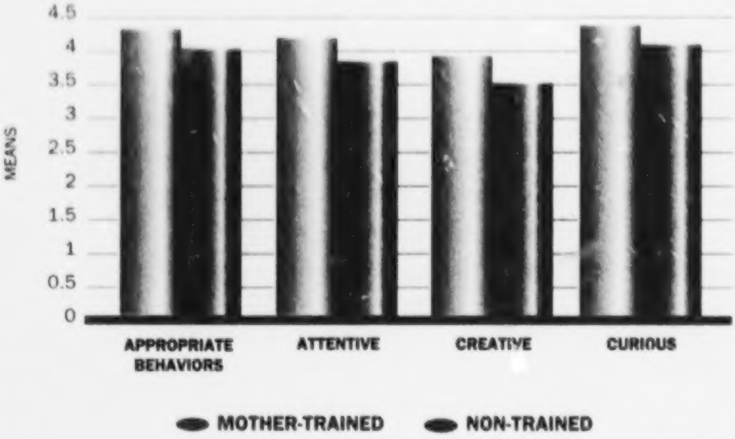
FIGURE 14
"STARTS READING" DATE



Teacher's Perception of the Child

Other than the child's readiness for school, the teacher's perception of the child is also an important determinant of academic success and failure since those children who are perceived as functioning better at school by their teachers are believed to have higher chances of being successful. Therefore, an attempt was made to see if there are any differences in the perception of the teachers for the children of the mother trained and non trained groups. The differences were obtained in the following variables.

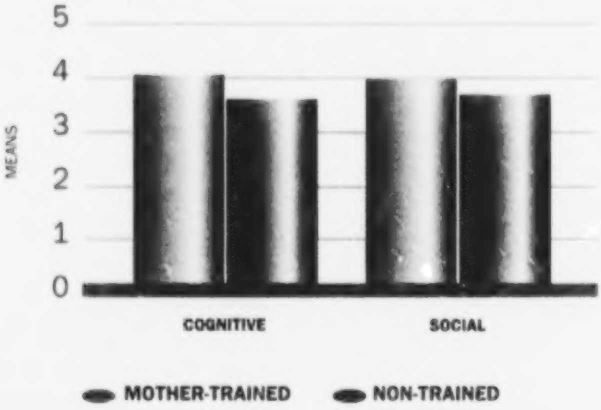
FIGURE 15
TEACHERS' EVALUATION OF CHILDREN



Teachers expressed that the children of the mother trained group display more appropriate behaviors at school than the non trained group. The difference was significant (mean= 4.23 vs 3.91, t(174)=2.38, p=.02). In addition to the above finding, the teachers' evaluation of the child with respect to various behaviors revealed significant differences between the children of mother trained and non trained groups. Teachers evaluated the children of the trained group as more attentive (4.11 vs 3.78, t(175)=2.18, p=.031) more creative (3.85 vs. 3.46, t (172)= 2.55, p=.012) and more curious (4.29 vs.4.00, t(175)=2.10, p=.037) than the children of the non trained group (see Figure 15 and Appendix B; Table B.9).

FIGURE 16

TEACHERS' EVALUATION ON SCHOOL READINESS



When the teachers were asked to evaluate the children with respect to their school readiness, the mother trained group of children were reported as being more ready cognitively (3.98 vs. 3.48, t (162)=2.82, p=.005) and socially (3.93 vs. 3.60, t(161)=1.99, p=.05) than the non trained group (See Figure 16 and Appendix B; Table B.9).

The differences in the evaluation of the teachers were found not only for the behaviors of children from the two groups but also for the behaviors of their mothers. The teachers stated that the mothers of the trained group come to school meetings more (4.53 vs. 4.19, t(175)= 2.14, p=.034) and that they are more interested in the child's school behavior (4.36 vs.4.00, t(175)=2.62, p=.01) than the mothers of the non-trained group children (See Figure 17 and Appendix B; Table B.9).

With the multiple regression analyses it was found that the perception of the teacher on the cognitive characteristics of the child was found to be related to the teacher's perception of the cognitive readiness of the child and the mother's interest in school (See Appendix B; Table B. 10). If the teachers found the child cognitively ready and believed the mother is interested in schooling, the teachers perceived the child as having appropriate cognitive characteristics for school success.

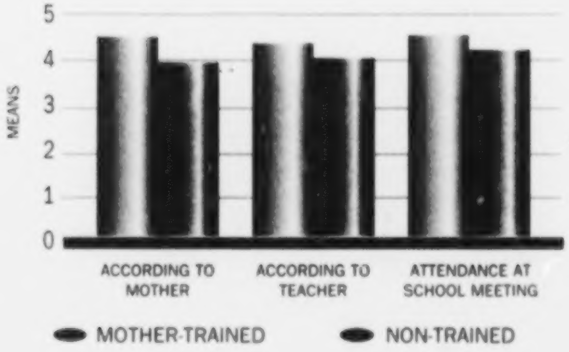
Better teacher evaluations of the trained children indicate the fact that these children encounter a more positive and accepting environment at school than the non trained group. This positive evaluation of the trained children is probably the result of the better performance of these children in academic skills. The evaluation of the teachers with respect to the school readiness of the child very clearly documents the fact that the program was especially successful in preparing children for formal schooling.

Effects on the Mothers

Mother's Attitudes Toward School

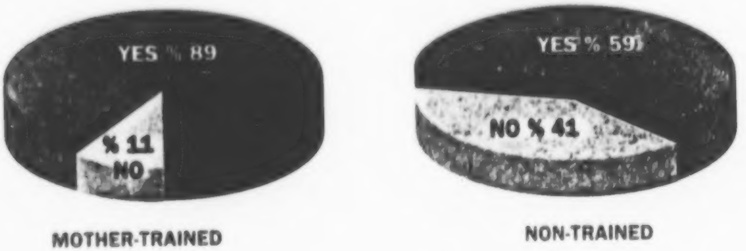
The self reports obtained from mothers revealed that the mothers in the trained group are significantly more interested in what happens at school than the nontrained mothers. The mean for the trained group is 4.47 and for the nontrained group is 3.93 ($t(169)=3.19$, $p=.002$). For results see Figure 17 and Appendix B; Table B.11.

FIGURE 17
MOTHERS' INTEREST IN SCHOOLING



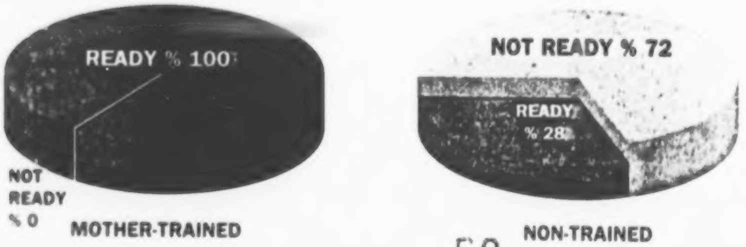
More trained mothers reported making an extra effort to increase their child's success at school than the non trained group. The significant difference is reflected by percentages obtained. 89% of the trained mothers and 59% of the non trained mothers stated that they showed an extra effort to increase their child's success at school (X^2 1,N=176)=20.58, p=.00001)(See Figure 18 and Appendix B; Table B.11).

FIGURE 18
MOTHER SHOWED EXTRA EFFORT FOR SCHOOL SUCCESS



There was a significant difference between trained and non-trained mothers' views on whether their children were ready for school (X^2 (1,N=177)=20.58, p=.00001). All the mothers in the trained group (100%) felt their children were ready when they started school while only 20% of the non trained mothers felt the same (See Figure 19 and Appendix B; Table B.11).

FIGURE 19
CHILD WAS READY FOR SCHOOL (ACCORDING TO MOTHER)



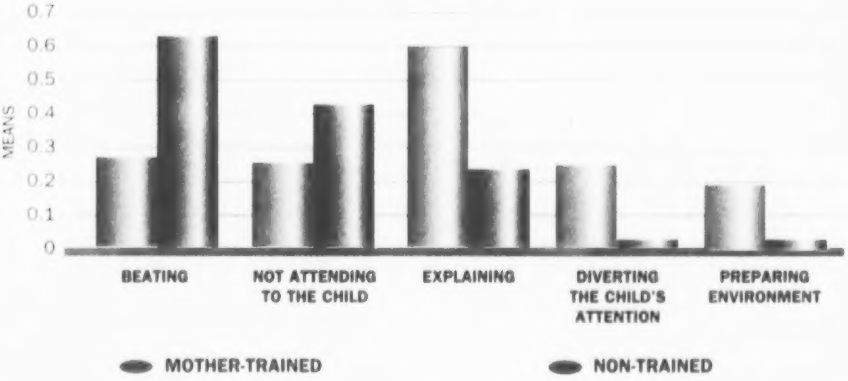
Child Rearing Attitudes

The results which indicate the effects of the program on mothers revealed that the positive child rearing attitudes which mothers had at the termination of the program still continued after a year. Moreover, the differences in the interest and efforts of the trained mothers related to the schooling of their children compared to the non trained mothers indicate a better home environment for the child's academic success. The similarity between the evaluation of the mothers and the teachers with respect to the school readiness of the trained children is an important indication for the success of the program.

To see if the changes in the mothers' child rearing attitudes obtained in the original study continued, mother's self report on the different methods of discipline employed by the mother and their possible behaviors in certain situations were obtained through an interview.

When the mothers' use of positive and negative discipline methods was investigated, the trend obtained in the original study was found to continue. The findings indicated significantly less use of negative discipline methods in the experimental group than the control group. The mothers of the trained group reported that they beat their children

FIGURE 20
MOTHERS' CHILD REARING ATTITUDES



significantly less than the non trained group. The mean for the trained group was .2674 and for the non trained group it was.6196. The difference was significant (t(170)=3.64, p=.000)(See Figure 20 and Appendix B; Table B.12).

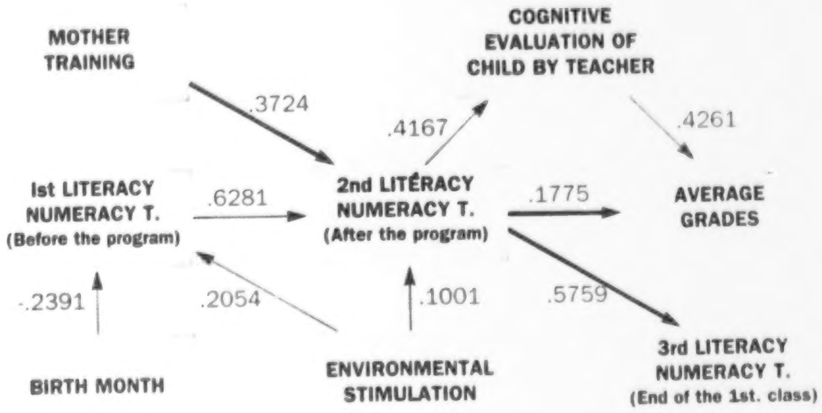
The same trend was observed for the non attentive behavior of the mother when the child seeks attention. The trained mothers were involved significantly less in non attentive behavior (.2558) than the non trained mothers (.4239), (t(176)=2.40, p=.02) (See Figure 20 and Appendix B, Table B.12).

Not only was it found that the trained mothers employed less negative discipline methods but they also used more positive methods. They were found to engage significantly more in behaviors like explaining why his / her behavior is wrong to the child, diverting the child's attention to something else when s/he is involved in unwanted behavior and preparing an environment in which the child can do what s/he plans to do without misbehaving (See Figure 20 and Appendix B; Table B.12).

When separate analyses for each behavior was carried out, it was found that the mean score for explaining reasons of wrong behavior was significantly higher for the trained group (.5930) than the non trained group (.2391), (t(151)=3.39, p=.001). The same trend was also found for diverting the child's attention to something else, while the mean score for the trained group was .2442, the mean score for the non trained group was (.0217), t(101)=4.30, p=.000). The trained mothers also reported that they prepare the environment for the child. The mean for this variable indicated a significant difference between the trained group (.1860) and the control group (.0217), t(107)=3.66, p=.000)(See Figure 20 and Appendix B; Table B.12).

As indicated in the beginning of this report the aim of the follow up research was to see whether the chain of interrelated effects deriving from the program develop into a positive cycle. Path analysis was used to further examine the relations between predictor and outcome variables. Z scores were computed for all the variables in the model and various path models were analyzed to find the most explanatory one. Figure 21 shows the resulting path model where only significant paths are shown with path coefficients. Direct effects that were statistically significant are represented by straight arrows. Mother's satisfaction with the child, sex of the child and study environment at home had no direct

FIGURE 21
PATH ANALYSIS


MOTHER TRAINING
COGNITIVE EVALUATION OF CHILD BY TEACHER
.3724
.4167
.4261
Ist LITERACY NUMERACY T. (Before the program)
.6281
2nd LITERACY NUMERACY T. (After the program)
.1775
AVERAGE GRADES
-.2391
.2054
.1001
.5759
BIRTH MONTH
ENVIRONMENTAL STIMULATION
3rd LITERACY NUMERACY T. (End of the 1st. class)

effects on any of the analyzed variables and were excluded from the path model. However, environmental stimulation, birth month of the child, pre-literacy and pre-numeracy scores of the child before and after training, training itself and cognitive evaluation of the child by the teacher are found to be effective variables on average grades and literacy and numeracy scores at the end of the first grade, and thus, were included in the model.

As Figure 21 shows, the birth month of the child and environmental stimulation have significant effects on the level of pre-literacy and pre-numeracy skills at the time the training begins. Environmental stimulation also has an effect, though to a lesser degree, on pre-literacy and pre-numeracy skills at the time training ends. The lessening of the effect of environmental stimulation after the program implies that training is in interaction with the effect of environment (See Figures 2 and 11 for the comparisons of stimulating and non stimulating environments according to literacy and numeracy scores for the trained and non trained groups).

Although there is no direct path from training to the first grade performances, pre-literacy and pre-numeracy scores of the child just before starting school is affected by the training, which in turn has an impact on the literacy and numeracy skills and average grades at the end of the first year. Also, it is found to effect the cognitive evaluation of the child by teachers which have a significant effect on average grades at the end of the first grade.

EVALUATION OF THE IMPLEMENTATION OF THE MOTHER-CHILD EDUCATION PROGRAM

This part of the research aimed to investigate the process of the program and examine relations between process characteristics and impact. Two main observations were made to explore the process of the program terms of its process . The first observation was aimed at the mother enrichment component of the program, which is implemented through group discussions. The other observation focused on the component which aims to foster the cognitive development of the child. Thus both the group discussions and the home teaching environment were examined. Observations were made at the beginning, in the middle and at the end of the program (See Table 8).

TABLE 8
PROCEDURE OF THE ASSESSMENT

At the 3rd WEEK of MOCEP	**At the 13th WEEK of MOCEP**	**At the 3rd LAST WEEK of MOCEP**
FIRST OBSERVATIONS	**SECOND OBSERVATIONS**	**THIRD OBSERVATIONS**
• HOME	**• HOME**	**• HOME**
• GROUP	**• GROUP**	**• GROUP**

To investigate the group process of the program, data was collected from the same sixteen sites in the four provinces during the group meetings of the implementation. Observations of the home teaching environments where the mother works with her child were carried out at home.

To assess the process of the program, observational procedures were developed for

i) the group as a discussion environment and ii) the mother-child teaching setting at home.

The observation schedules aimed to assess the adequacy of the implementation of these two components of the program. Thus, observation of the group discussions focused on participation of the mothers in the discussions, clarity of the messages transmitted to mothers and the nature of the teacher-mother interactions. The other observation procedure focused on the teaching experience of the mother with her child to assess the quality of the teaching process at home. The two components were broken down into different sub-components and the adequacy of each were assessed either with a seven point scale with values running from inadequate (1) to excellent (7) or with a five point scale with values from inadequate (1) to excellent (5). For the observation scales both inter-observer reliability and internal consistency studies were carried out. Minimum agreement of 75% was accepted among the observers to begin the observations. The internal reliability score for the home observation scale was .72 and for the group observation scale it was found to be .84.

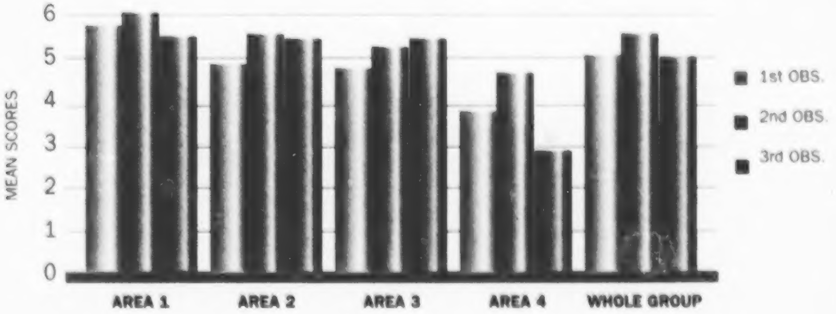
Group Observations

Observations of the group process at three different points revealed differences between mean scores. The mean scores reflect performance on different components of the group process relating to how well the topics of the mother enrichment program are discussed; how well the exercises of the cognitive development program are actively taught; how well the environment was prepared for the group meeting, and how effective the coordinators and teachers were in carrying out their roles.

Group observations done at three different times indicated an increase in the mean score from the first observation to the second and a decrease from the second observation to the third. Thus a significant difference occurred between the first and the second observations ($t(106)=11.70, p=.000$) and between the second and the third ($t(106)=7.34, p=.000$). No significant differences were observed between the first and third observations since the group means indicated nearly a same level of implementation (See Figure 22 and Appendix C; Table C.1). These findings show that the group process gets better towards the middle of the program but also displays a decline towards its termination.

When observations at different times were compared across areas significant differences were observed. For observations at time one, time two and time three, results show significant differences (Time 1: F(103) =69.70, p=.0000); Time2: (F(103) =11.26, p=.0000); Time 3: (F103 =142.1, p=.0000) across the four areas. For the three different observations the group mean for Area 1 was the highest for the two observations and the group mean for Area 4 was the lowest for all. Group mean values for Area 2 and Area 3 in three of the observations were in between Area 1 and Area 4. Appendix C; Table C.1 presents the group means for each area. Not only were differences obtained across time but differences were found across areas within the same observation period. This indicates the presence of differences in the implementation across areas and during the course of the program.

FIGURE 22
GROUP OBSERVATIONS

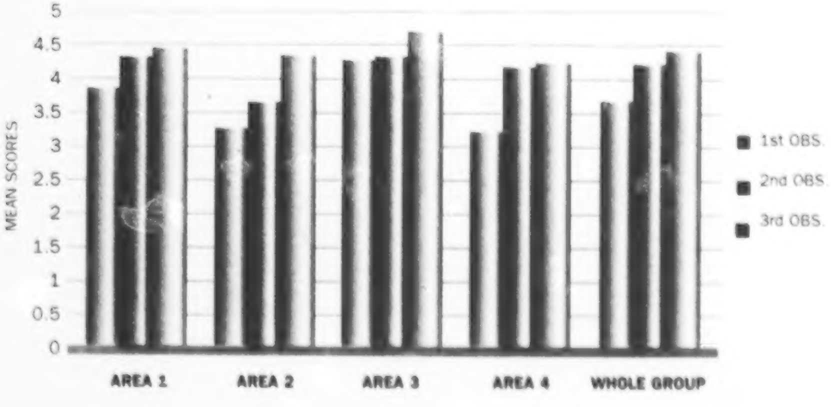


Home Observations

A comparison of home observations conducted at three different times to investigate how well the mother implements the cognitive development program revealed differences for the whole group. An increase in the mean scores was observed within time. Mean score for the second (4.16) and third observations (4.39) were found to differ from the first observation (3.66). The difference between the first and second observation were significant at $t(106)=9.57$, $p=.000$) and the difference between the first and third observations were significant at ($t(106)=13.46$, $p=.000$). Also the mean score of the third observation was significantly higher than the second observations ($t(106)=5.18$, $p=.000$). Group means are given in Appendix C; TableC 2. These results indicate a significant increase within time in the quality of implementation at home for the whole group (See Figure 23 and Appendix C; Table C.2) .

Similar to the results obtained for the group process, the observations of the home teaching environment illustrated differences at time one, time two and time three across the areas (Time 1:F (103)=20.72, $p=.0000$; Time2: F(103)=12.95, $p=.0000$), Time3: F(103)=5.29, $p=.002$. As the group means in Appendix C; Table C 2 illustrate, the group means for Area 3 was the highest in three of the home observations and the group means for Area 4 was the lowest. Thus the results indicated an increasing improvement in the implementation of the home teaching in all of the areas and differences of implementation among areas.

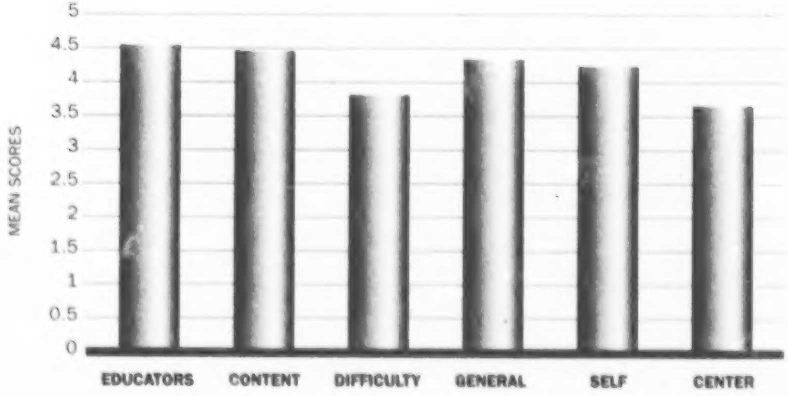
FIGURE 23
HOME OBSERVATIONS



EVALUATION OF THE DISSEMINATION STRUCTURE OF THE MOTHER-CHILD EDUCATION PROGRAM

To monitor the dissemination structure, evaluation of the training seminar by the trainees, evaluation of the performance of trainees by the trainers and assessment of the knowledge acquired by the trainees about the program were investigated. Assessment of the knowledge acquired by the trainees during the training seminars was done by asking them certain content questions about the program. This reflected whether the trainees. (coordinators and teachers) had grasped the program content or not. The evaluation of the performance of the trainees by the trainers illustrated the competency level of the trainees with respect to the implementation of the program. The trainees were also asked to complete an evaluation form about the training seminars with respect to the content, the trainers and the educational environment. The primary purpose of these two evaluations of the training seminars was to identify both positive and negative issues that emerge during the training. Trainers were also expected to supply information about their job descriptions in the adult education centers where they work, the organizational climate of the center and the attitude of the center towards the program.

FIGURE 24
EVALUATION OF THE SEMINARS BY THE TRAINEES



All the province coordinators (22) and the teachers (89) who were trained during the year 1995-1996 were included in the evaluation of the dissemination structure .

To monitor the dissemination procedure, two rating scales were developed. While one of the rating scales reflected the evaluation of the training seminars by the trainees, the other investigated the evaluation of the trainees by the trainers. Reliability studies were carried out for the two scales. The reliability coefficient for the scale by which trainees evaluated the seminar was found to be. 89 and that for the scale evaluating the performance of the trainees by the trainers was .96. Trainers knowledge related to the program was assessed through a test which contained multiple choice and true-false items.

The level of knowledge of province coordinators and teachers was assessed both at the beginning and end of the training. Evaluation of the trainees by the trainers (program consultants) and the evaluation of the training seminars by the trainees were conducted after the training was over.

The trainees evaluated the different aspects of the training seminars and their own ability to implement the program and how much the centers are prepared to implement the program on a five point scale. As Figure 24 indicates, the trainees rated very highly on the trainers (mean score=4.51), content of the seminars (mean score= 4.44) and the general environment of the seminar (mean score =4.31). They also perceived themselves ready to implement the program (mean score= 4.20). While they found the seminars quite intense (mean score= 3.79) they evaluated the cooperation of their centers to implement the program not very highly (mean score=3.63).

The trainers evaluated readiness of the trainees to implement the program on a five point scale. They found the trainees to be quite ready for implementation; they rated their performance high in general (mean score= 4.35), their application of mother enrichment discussion topics (mean score =4.23), and their application of family planning topics (mean score = 4.45) (See Figure 25).

As can be observed from Figure 26, a significant difference was found between the pre and post evaluations of the level of knowledge of trainees (66.10 vs 52.92, t(85)=20.13, p=.000).

FIGURE 25

EVALUATION OF THE TRAINEES BY THE TRAINERS

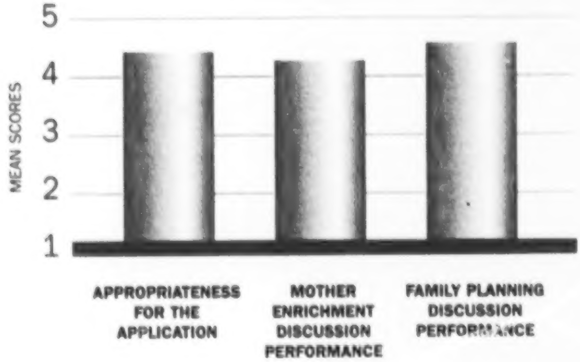
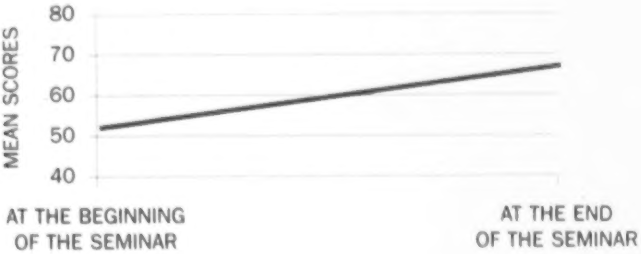


FIGURE 26

PRE-POST TRAINING DIFFERENCE IN THE KNOWLEDGE OF THE TRAINEES



The results obtained from the evaluation of the seminars indicate that the seminars are effective and trainees are capable of implementing the program after they finish their training period.

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Discussion

The scope of intervention programs has been expanded as a result of various theoretical interpretations (Bronfenbrenner, 1979; Minuchin, 1985; Sameroff, 1975), and have acknowledged as their responsibility the support of both the child and the family. Discussions about the rationale and process of intervention programs have mainly focused on the relationship between the programs and families receiving them. These programs have tried to go beyond promoting child development to include families as important partners (Bronfenbrenner, 1979). When this is the case results include both family and child outcomes. Consequently, in addition to child outcomes, parental knowledge of developmental milestones, parental attitudes toward child rearing, or parent-child interaction are seen as important indicators of effectiveness. All these changes in scope call attention to the importance of contextuality which in turn calls attention to the importance of the immediate environment in the development of the child.

The results of the present research clearly reveal the impact of early home intervention not only on children but also on one of the significant adults in the immediate environment, the mother, and on the relationship between the mother and the child. Thus, the contribution of the program to the functioning of the mother and the development of the child is well specified.

The immediate results obtained right after the termination of the Mother-Child Education Program indicated the effects of the program on the mental capacity of the child. This is reflected mainly by the better performance in pre-literacy and pre-numeracy skills of the children whose mothers attended the program. Since the pre-literacy and pre-numeracy skills instrument aims to assess the acquisition of skills which are necessary for learning how to read and write and to do mathematical functions, better performance indicates a better standing in these skills. Pre-literacy and pre-numeracy skills gain importance when children start primary school since the position of children with respect to these skills will promote their success during the first year of schooling. It is expected that if children have school readiness at the beginning, they will be more able to meet the expectations of the school (Schweinhart, Barnes and Weikart, 1993). The effect of the program on pre-literacy and pre-numeracy skills show that these children are better prepared for formal schooling and achievement.

The likelihood that school readiness will pave the way for better academic performance is well documented in the results obtained on the mental capacities and the school success of children at the end of their first year of elementary school. The assessment of children in literacy and numeracy skills revealed greater acquisition in the children whose mothers were in the program. Moreover, the results of the path analysis illustrate that success on the literacy and numeracy skills at the end of the primary school is related to the pre-literacy and pre-numeracy skills obtained right after the termination of the program (post test). These findings show that those who have better scores on the post test (after the termination of the program) had better scores in elementary school, which is the case for the children whose mothers were in the program. This indicates that the effects of the program on mental capacity are carried over to formal schooling.

It is well known that literacy nurturing activities are not a part of early experiences in most unstimulating environments (Aksu-Koç and Kuşçul, 1994; Feitelson and Goldstein, 1986). Therefore children from unstimulating environments fall behind those age mates who come from environments which are more stimulating for these skills and in turn experience school failure (Payne et al. 1994).

Although all of the families and children included in the present research were from "at risk" environments, there were differences in the level of stimulation experienced in their immediate environments. Thus, the environments were easily separated into high, middle and low level of stimulation. The difference in the stimulation was the result of the differences due to the educational level of the mother and father, number and type of toys present at home, the frequency of buying newspapers, magazines, watching TV and the intensity of mother-child interaction. The significant difference obtained for pre-literacy and pre-numeracy skills between children from stimulating and non stimulating environments of the non-trained group is in line with expectations. What is surprising is the similar pre-literacy and pre-numeracy skill scores obtained for children coming from both stimulating and non stimulating environments of the trained group. Interestingly, a similar result was obtained at the end of the first year of elementary school for the first year literacy and numeracy skills. All these ascertain the role of the program in overcoming the distressing effects of unstimulating environments. The better performance of children from the trained group and from unstimulating environments on pre-literacy and pre-numeracy skills compared to the performance of children from the stimulating environments of the non-trained group indicates the undeniable role of the early intervention for a fair start. Thus, those children whose cognitive development is fostered by an intervention program are able to perform far better than if they were left on their own.

As the home environment changes on a continuum of stimulation, the environment in which the child studies at home also changes in terms of its adequacy. Adequacy of the study enviroment is important for the child's school success. Those children having better study environments are believed to be better at school since they will have a more appropriate context in which to do homework and study than those who have inadequate study environments. In some instances it is very difficult to create an adequate study environment due to housing conditions. This is believed to be an important factor influencing the level of school success for children coming from disadvantaged environments. A similar level of performance obtained on literacy and numeracy skills of children exposed to the Mother-Child Education Program coming from adequate and inadequate home environments is an important finding indicating the effect of the program, especially when the performance of children with adequate versus inadequate study environments from the non trained group differ from each other. In the non-trained group, those with adequate study environments score higher than the ones coming from inadequate study environments. Although the conditions of the study environment could not be changed the program was able to overcome the negative consequences of having an inadequate study environment and help to obtain better literacy and numeracy skills. Thus the program is able to benefit children that are in both adequate and inadequate study environments and overcome the differences between children from advantaged and disadvantaged environments.

The above results indicate that when children are given a chance to get involved in activities which can help them reach their optimal potential, they are able to perform better than their counterparts despite the existing poor socio-economic conditions. Furthermore, being exposed to such an experience is observed to be important in overcoming the differences due to gender. The significantly better pre-literacy and pre-numeracy skills of girls than boys in the trained group is the result of being exposed to the program since such a difference was not observed for the non trained group. The fact that the girls started the program far behind the boys indicates clearly that the program works best for those who are in need of such support the most.

It is reported that literacy and numeracy skills and literacy related opportunities present at home prior to formal schooling are important factors for success in formal schooling and later literacy achievement of children (Campbell and Ramey, 1994; Raz and Bryant, 1990). Different home environments are found to have different effects on the child's literacy level and cognitive ability since the presence of literacy related opportunities are important for this capacity (Aksu-Koç and Kuşçul, 1994; Campbell and Ramey, 1994). The primary caregiver, usually the mother, plays an important role by mediating between written language and the developing child by shared book reading or creating activities of sound and letter recognition (Snow et al. 1985; Sulzby,1986). Such activities are found to be related to emerging literacy abilities and literacy related activities that have a relationship to reading (Whitehurst et al. 1994). The component of the Mother-Child Education Program which aims to foster the cognitive development of the child is based on literacy and numeracy activities in a context of mutual interaction of the mother with her child where the mother plays a mediator role. During these activities the mother is involved in scaffolding dialogues to make the child function in the zone of proximal development. Such instructions lead the child to the outer bounds of her/his competence and reach her/his potential level. That is, what children are not able to do by themselves they can do with the help of the mother. In addition, the interaction present during book reading which has cognitive challenges like talking about vocabulary, predictions about outcomes and comprehension contribute in important ways to the literacy and numeracy skills obtained in children of the trained group. The Mother-Child Education Program with its component to foster the cognitive development of the child is found to create a home environment with necessary stimulation for such literacy and numeracy activities by making the mother active in this environment. As the model of Sternberg, Grigorenko and Nokes (1997) propose, the research findings designate that almost all children have the capacity to learn when they are provided with the appropriate environment.

In the present research, cognitive development of the child was found to be enhanced by the intellectual stimulation of children and by creating a developmentally appropriate environment through the program. This early stimulation brought school success with grades, teachers' evaluations and "starts reading" date. Thus, children coming from empowered environments started school ready and this increased their chance of early school success. The average grades of the first year of the elementary school revealed differences between the trained and non trained groups in that the children of the trained group had better grades than the non trained group. It is believed that being in the Mother-Child Education Program created the causal condition which led to this outcome. This is verified when the relation between average grades and variables other than the program is considered. A relation is observed both between the teacher's cognitive evaluation of the child and average grades and post test of the pre-literacy and pre-numeracy scores and average grades. Those who received higher evaluations on the teachers in terms of cognitive functioning and higher pre-literacy and pre-numeracy scores were the trained children who also had better grades. That is, there was a strong relation between teacher's cognitive evaluation of the child and post test of the pre-literacy and pre-numeracy scores. Thus, children who entered school with necessary skills met the demands of the school and were perceived by the teacher as cognitively ready.

An earlier "Starts Reading" date achieved by the trained children is another indication of school success. This suggests that opportunities for literacy related activities in the home have significant effects on reading achievement of children. The model of Whitehurst et al. (1994) which clearly illustrated the relation between preschool literacy activities with reading is pertinent for the outcomes of the present research. Children who are exposed to shared reading and letter, sound recognition through the Mother-Child Education Program had an awareness of language use, writing and print concepts. These children with such emergent literacy activities are found to read earlier than their peers coming from similar environments. The goal of the Mother-Child Education Program, which is to promote a healthy overall development to ensure a successful start at school and better school adjustment and success, is observed to be fulfilled by the program.

School success is not only reflected in the performance of children but also in how others perceive the child's academic position and performance. Teachers perceived the children from the trained group as more socially and cognitively ready for school. These children were also found to be more attentive, creative, curious and having more socially adjusted behaviors. Different factors were found to be effective in creating the perception of the child as cognitively more capable by the teacher. In this research the behavior and the attitudes of the mothers related with the school were influential factors as well as the child's cognitive readiness for the school. Teachers of the trained children, in addition to finding them more ready, also reported that their mothers were more interested in school and attended to school meetings more. Although the relation between the teacher's perception of the child's cognitive readiness and cognitive characteristics and mother's interest in school does not imply any direction, it is expected that those children who are cognitively ready and whose mothers show interest in school will be perceived cognitively better by their teachers.

Interestingly, interviews with the trained mothers indicated that they perceive themselves as more interested in their child's school and show an extra effort for the success of their children in school. They also perceived their children as ready to start school. All these indicate a home environment which is interested in child's school performance and success and has positive attitudes toward school. Thus, the program was successful in improving both the child's readiness for school and supportiveness of the home environment. It has been argued that those children who can meet the demands of school will be accepted as successful by their teachers and this will, in turn, be reinforced to children and affect their academic performance and progress. All of these factors will, of course, effect success in adult life (Berrueta-Clement et al., 1986; Myers, 1992; Woodhead, 1986).

The observed changes in children's development which show the success of the Mother-Child Education Program revealed the important role of the context within which children live. The activities of the Mother-Child Education Program enabled children to become involved in new transactions with their environment since their mothers were not only exposed to discussions of different parenting skills but also had a chance to stimulate their children directly through educational activities. In these activities children were in learning environments where they had close relations with their mothers and were supported by them cognitively and emotionally. It was the mother who guided the child into new cognitive and social skills, who helped the child to practice and increase new skills and stimulated the language development, that is, in the primary mechanisms of development (Ramey and Ramey, 1998). Thus, through the transactions with their mothers these children experienced developmental priming mechanisms which are reported to be critical to normal development by Ramey and Ramey (1998).

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The findings not only clearly indicate the importance of the experiences the environment provides to the child but also show how the child and his environment are not independent of one another. Thus, the mothers who provided cognitive and social stimulation to their children perceived them as ready for school and invested more in their school success. Those children whose mothers found them ready for school and showed interest in their school were successful. Thus, a change in one of the parties implies a change in the other. It is believed that the developmental changes observed as a result of the program were the product of the interaction of the child with the experiences provided by his family.

The results also indicate the role of another system on the child's development other than the family; the school. The higher evaluation by the teacher of the cognitive functioning of trained children, and the relation between this perception and the child's success, and the role of the intervention program in all, indicate the linkage between the home environment (micro system) and the school (mesosystem). Thus, it illustrates well the interaction of the microsytem with the mesosystem. Furthermore, the relation between the mother's interest in school and teacher's perception of the child indicate the importance of the accompanying supportive links to the participation of the child in different settings, in this case the school. Moreover, the findings also underline the effect of the home intervention program on systems other than the home.

The intervention program enabled the family to help the child grow, learn and develop. This was facilitated mainly by the role the mother played in providing a home environment rich in mental stimulation, an interest in the child's school success and positive attitudes toward school. Thus, children who were empowered by intellectual stimulation were supported by family members and the environment. The program was not only functional in creating an intellectually stimulating environment but also in creating an environment where there is a pleasant, understanding mother-child interaction, less punitive parenting and in turn a more pleasant home environment. The change observed in the mother's discipline behaviors, where the mothers of the trained group no longer employed negative discipline methods like shouting or beating and began to practice positive discipline methods such as explaining with reasons and presenting rules, is an indication of change noticed in the home environment. Similar findings obtained a year after the termination of program, at the end of the first year of elementary school, indicate that the change induced by the program was maintained.

Mothers who have participated in the program not only displayed positive change in their child discipline methods but also their child rearing practices changed. This was reflected in their behaviors like keeping promises made to the child and answering their questions appropriately. Thus, the mothers started to perceive their children as individuals who have their own needs and inquiries which have to be met. They also acknowledged that children have their own personalities and are different from adults. Mothers of the trained group began to appreciate the behaviors which they used to label as "mischievous" or "naughty" and even prepared the environment for children to involve in these behaviors freely. Thus, they were ready to change the home environment for the child's development. It is worth mentioning once again that these behaviors which they changed were the ones which they did not previously approve of.

When the question of for whom the program brings more change is asked, an interesting result is obtained. Mother's self esteem, her status in the family, stimulation level of the environment, quality of the implementation of the program were observed as factors influencing the change obtained in the mother's child rearing and discipline behaviors. To be more precise, those mothers who have higher self esteem and higher status in the family, and come from unstimulating environments changed more. As expected, the more deprived the environment the more the change was. When the mother's status in the family increased, she was involved in less punitive behavior and as her self esteem increased she became more involved in explaining behavior. Thus, when the mother was happy with herself and her status in the family, she changed more and displayed more positive interactions with her child and less negative ones. The relation between the implementation of the program (process) and the outcome (product) is demonstrated in the finding which indicates a relation between the quality of the group meeting process and change in the mother's behavior. As the quality of the implementation increased, the change from the negative child rearing behaviors to positive ones were obtained. Although no direct effects of the program on the mothers were expected, self reports of the mothers who have been in the program indicated a positive change in their self esteem after the program. When the relation between self esteem and child rearing behaviors of the mother is considered it can be said the program was effective not only in directly effecting the mothers but also through increasing their self esteem.

It is clear from the results that the activities of the Mother-Child Education Program were effective in encouraging and enabling the mothers to be more involved in certain transactions with their children. These transactions helped to create an environment in which the child was protected from inappropriate unpleasant experiences in addition to experiencing cognitive and social stimulation. These changes in the behaviors of the mothers led to the differences in the development of their children. Even the perception of the children by their teachers was influenced by the behaviors obtained by the mothers after being in the program.

The mothers and children started the program with their unique personal histories. Through the early intervention activities they were both exposed to various learning and stimulating experiences which led them to different transactions with each other. These interactions changed both the mothers and the children. The changes observed in both parties influenced their interactions with the school system and brought school success. During the intervention program the group context of the training is believed to provide a socio-emotional supportive function for the mothers. The socio-emotional support which mothers experienced throughout the intervention was an important factor for the success of the program and the continuation of the effects especially in a socio-cultural context where there are close-knit human relations (Kağıtçıbaşı, 1997).

All the evidence from the study indicates the importance of the program in the development of the child, in the mother-child interaction and the mother herself. The success of any program is dependent on the quality of its implementation (Pence and Moss,1994; Philips and Howes,1987; Sylva,1996). Those programs which have high quality are more successful than low quality programs. How well a program is implemented depends both on how well the process is undertaken and how well professionals implement the program. The observations conducted in the group meetings and the home environment indicated a high level of quality in implementation.The group observations reflected how well the three components of the program were implemented with the mothers. A direct relation is expected between how well the program is implemented in the group meetings and the success of the program. It is believed that if the teachers implement the program as prescribed, the mothers will benefit from the program more. The observations of the group meetings revealed a high quality of implementation for nearly all the groups. Observations at home; which indicate how well the mother does the worksheets with her child; reflected similarly a high level of quality. These results verify the assumption that well implemented programs are successful. The evaluation of the implementation clearly revealed a difference in the quality of implementation in the different areas in which the program is being used. Although the difference across areas did not reach a level suggesting the impairment of quality this is still an important finding for the impact of the program. It was observed that the quality of implementation of the program decreased towards the end which suggests that particular attention must be paid to implementation during the last phase. A consistently low level quality of implementation found in Area IV calls attention to the importance of recognizing the socio-cultural characteristics of the area of implementation as the local characteristics of this area was rather different than the other areas.

How well the professionals implement the program depends mainly on how well they know the content which is in turn related to the success of the training they undergo. Evaluation of the training seminars indicated that these were successful as reflected by a significant increase in their program related knowledge. Furthermore, teacher's performance was evaluated positively by the trainers, and the teachers evaluated the different components of the training procedure as effective and appropriate. Thus, not only the evaluation of the quality of the implementation but also the training of the professionals who implement the program show that both reached a level of high quality.

Summary and Policy Implications

In the Mother-Child Education Program a contextual approach to the development of the child is used. This necessiates that early enrichment is provided to children in the context of their home where they can reach their level of proximal development. This approach requires the continuation of the stimulating conditions after the termination of the program. In creating this potential home environment the program aims to strengthen the family; focusing on the mother. In this process, emphasis is given to building up the already existing resources so as to prevent future adaptive and developmental malfunctionings for the children especially from environments that cannot provide the necessary support for healthy overall development. It is believed that when parents are informed about the developmental needs of their children and are made active in their children's development, the chance for the immediate environment to function as the zone of the child's proximal development is fostered. Based on this framework the Mother-Child Education Program creates opportunities for meeting the rights of children both to reach their full potential and to be educated.

The evaluation of the program indicated important outcomes both about the program and its contribution to the system prevalent in the country. The results well document the fact that mothers saw the intervention program as appropriate in making a difference in their child's, their family's and their own lives. Furthermore, the program enabled the mother to help the child's growth, learning and development. All the positive developmental outcomes were obtained through the mother where she herself experienced various changes which in turn were reflected in her role in the development of her child, in her interactions with her child in general and in her family environment.

All the results illustrate well that the program was successful in fulfilling its main aims by creating a stimulating home environment where opportunities are provided to the child to reach her/his optimal development. This is reflected in the differences obtained between program and non program children on outcomes which indicate school readiness and mental functioning before entering the formal school. Thus, the program prepares the child for school by enhancing his/her cognitive capacity and social competence. Furthermore, the children of the program group were found to deal more effectively with the abstract and disembedded learning of formal schooling which is reflected in better school performance as well as better perception by teachers and parents in terms of their school performance.

The results also indicated an improvement in the relations between the mother and her child which implies the presence of an adequate home environment for healthy child development. The effects of the program on factors like child rearing orientations, types of discipline, mother's status in the family, her self competence and family support network indicated that the program's intended messages were conveyed to the parent. This can be seen in the fact that mother's self competence, status in the family and the present level of stimulation in the home context were found to be factors differentiating the participants who benefit more. Those mothers who had higher competence and better status in the family and came from less stimulating environments benefited most from the program.

The investigation of the implementation of the program made the identification of the variations in the implementation and their contribution to the outcome of the program possible. The relation between the process and product of the program illuminated the connection between the program strategies and effectiveness, in turn modifying the necessary parts of the program.

In sum, the program was effective in making the children ready for school and successful in school, and in creating a better home environment in which the mother and child have a positive relation. In addition, both the implementation of the program and the dissemination structure reached a level of quality where it was possible to have a successful outcome.

These are important findings when the conditions of the system in the country is considered. The results indicate the effectiveness of an indigenous program rather than one that is developed in other countries which it is difficult to generalise to other contexts. This reality increases both the capacity and the responsibility of the program in the country since it makes a broad implementation well-grounded. This is an important finding in a country where there is no widespread early education system, where nearly all the services are center based and only 9% of the target population is reached. The conditions of the system call attention to how this shortage and the unsatisfactory conditions can be overcome. Center based early childhood education is one of several models and is the most expensive and the hardest to implement on a large scale. The Mother-Child Education Program as a home based program is an example of a different model. The target population who will benefit from the system have different needs which are difficult to meet within the confines of a single model. It might therefore be easier and more beneficial to include different models in the system in expanding it. It is also more effective to implement different models for different parts of the population. Furthermore, the Mother-Child Education Program as a home based program is more cost effective than center based programs. This allows the system to reach wider and the most needy populations in a short time. Due to the nature of the existing early childhood education system children "at risk" are not well targeted. The Mother-Child Education Program with its contextual base and effective outcomes for children from unstimulating environments can be considered as an important means to reach this particular target group and meet their needs. This would surely help to alleviate inequalities due to socio-economic conditions.

It is well accepted in the literature that the effects of a program is related to its quality. The present early childhood education services in the system are distinctly divided into two; educational and custodial. Unfortunately the number of the custodial centers outnumber the educational ones in the country. Under these conditions the effectiveness of the present system is questioned especially for those children coming from unstimulating environments. All these emphasize the need for quality child care in the country. The role of home based programs is more important in a country where quality in center based programs has not been established than in countries where there is already a high quality system.

The level of education in the formal school system is closely related to the readiness level of the students entering the system. It is believed that if the children are better prepared for school they will be more likely to attend school and to perform at a higher level than less prepared children. Furthermore, these children will effect the functioning of the primary school system by increasing both the efficiency and quality of the system. In turn educational expenses will be saved since there will be few dropouts, retention and few who need remedial education. The results of the evaluation of the Mother-Child Education Program well exemplify the role of the program in school readiness and school success. Compulsory education has been increased to eight years recently in Turkey. This act not only calls for extra buildings, teachers, equipment and materials but also for attention to improve the quality of the system. Thus, those children who are ready for formal schooling will help improve the quality in the formal school system and decrease the expenditure for those who fail in the system.

Programs like the Mother-Child Education Program have an important role for the advancement of human development by overcoming as much as possible the unfavorable conditions of the environment. This role is more important during the early years of human development when the function of the environment is more distinct. A program which empowers both the child and the mother, like the Mother-Child Education Program is not only an example of a early childhood education program but has considerable importance for community development.

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Evaluation of the Mother-Child Education Program from Mothers' Self-Reports

Throughout this study, it was always believed that the views and feelings of mothers who have participated in the Program are just as important a measure of the success of the Program as the numbers reached and the statistical findings presented in this report.

The self-reports of mothers put forth things that cannot be reflected by numbers since they are essentially and by their nature personal reports and they reflect the effects of the program from a very different perspective.

The teachers, therefore, asked the mothers who had participated in the Mother-Child Education Program to give their written opinions about their experiences and the changes they felt it gave rise to. Among these, 32 mothers who had participated in and completed the Mother-Child Education Program during the 96-97 educational year were randomly chosen, and their opinions about the program and the changes and developments which they felt were due to their participation in the program were evaluated. These reports have been collected under certain headings in order for expressions and interpretations to be presented as a whole. The reports of the mothers have all been presented in their own words.

Changes Seen in Children

Acquirement of Cognitive Abilities in Children

A lot of mothers wrote that their children acquired many skills through the program that they had not possessed before, such as; recognizing numbers, counting, discriminating letters, recognizing geometric figures, beginning to comprehend concepts like above, below, recognizing colors, painting, drawing, improving hand skills, holding a pen, discriminating straight lines from curves, listening and comprehension, explaining what they have listened to, answering questions etc.

"The changes with my son was such that they could clearly be observed. Before he

was unable to even hold a pencil, now he sits down and paints pictures and writes his name. He is also able to solve simple addition and subtraction problems"

"In the program we read stories to children and made them work on the "ZEPs" (Cognitive Development Program). As time went by children became more informed. For instance they learned concepts like same-different, concepts of colors, and most importantly traffic lights. He has learned about animals that he had never seen before, he learned largeness and smallness. When I now ask what time it is my child can answer me, when he sees a number somewhere he can say mom look this is a 5 or this is a 10."

"With what I learnt at the course I have also guided my children. I think that I enabled a considerable degree of change in my child. He learned to count and the different geometrical figures and colors and I think that together we are learning all the subjects that can be learnt before schooling ."

"There is also the Cognitive Development Program, we have benefitted a lot from those as well. My child listens to a story that I read, tells that story by adding things from herself, paints pictures from the book and many related things."

" I believe that the Cognitive Development Program was very beneficial for my child. He has learned many things that he did not know before. Also, his hand muscles developed, his vocabulary expanded. I believe that when school starts he will benefit a lot from these things that he has learned."

Change in the Child's Behavior and Social Relationship

Mothers reported that their children's behaviors and relationship with their environment improved. They stated that their children have become closer to them, that there are differences in the relationships with their brothers and sisters and friends and even notiecable differences in the games they play. They also report that their children have started to behave more independently, are fullfilling their responsibilities and that their self-confidence has improved.

"my daughter relaxed, she stopped asking me about the smallest things... before she was not confident in herself, now she is relaxed and free and does not hide anything from me"

"my child was angry and aggressive, she became well-mannered and respectful to her environment... she learned to get along well with her friends"

"he doesn't come up against me... he can create games by himself, his self- confidence has improved, he is certain about the truth of things he says or does"

Mothers also reported on the problems they experienced with their children and how some of these problems lessened with participation in the program.

"he has learned to be more respectful towards his elder sister, his dialogue with his friends has improved, he has learned to share, developed a sense of responsibility and is not so naughty. He used to ocassionally wet his bed at nights, this problem disappeared after the training"

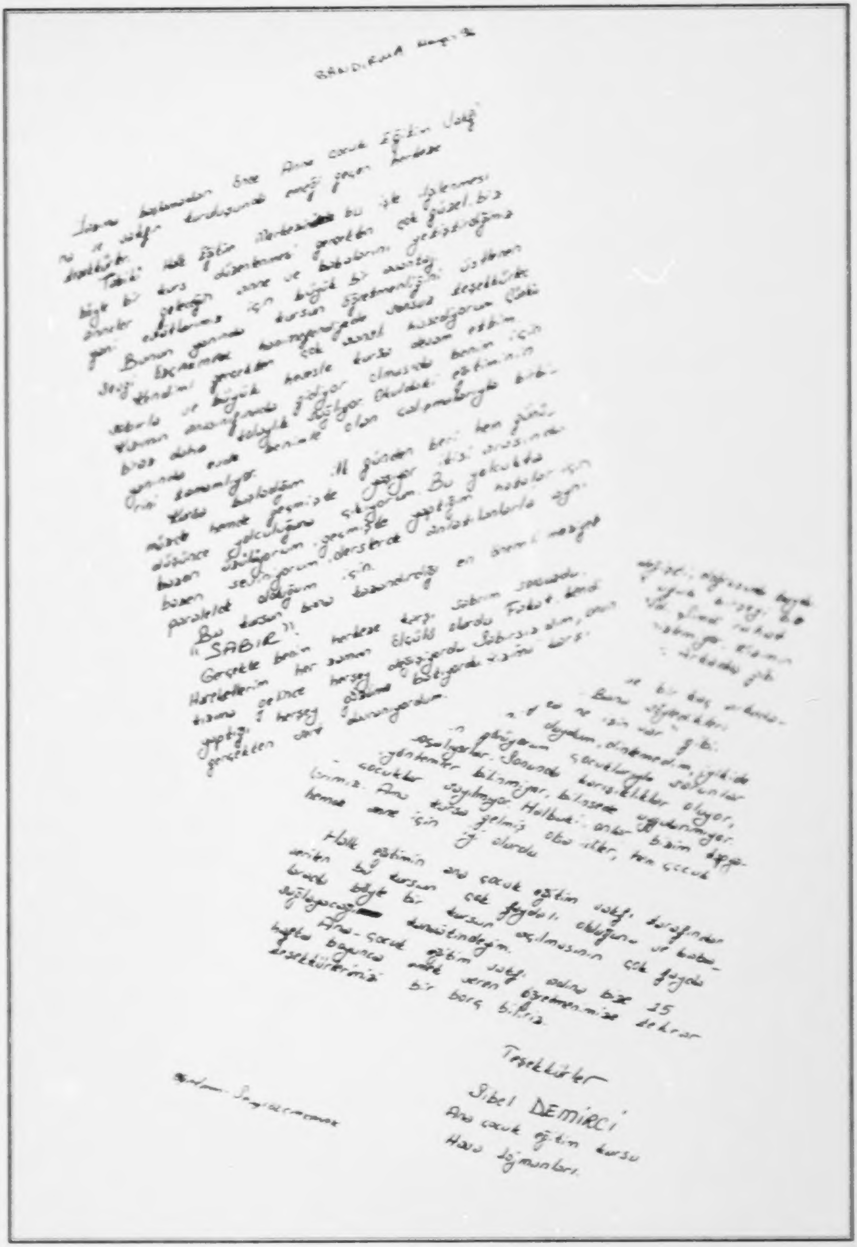
"my daughter never used to drink milk and I used to get worried about this. I would insist, would sometimes even hit her but no use. After the training I began to give more importance to milk products. Another example; Meltem wouldn't eat spinach either, me and her father can now make her eat spinach by explaining how good it is for her."

Some mothers have also added that the program was beneficial for their other children and that it has helped to solve problems related to them, too.

"...her sister did not like some foods as well, we read the nutrition planning in the handouts you gave and applied them"

See how the things a mother has written explains the change in the behavior of her children:

"Since the course, I've realized that it is me that has changed not my child. The child treats you according to the way you treat him. Now I listen to the things that my child tells me, I am more patient when he is naughty or when he does things I do not want him to do. Now I explain to him why I don't want him to do it... all of this has been realized



BANDIRMA [illegible]

[illegible] [illegible] bize Ana çocuk Eğitim Vakfı[illegible] ve vakfın kurduğunu [illegible] gören herkese teşekkür[illegible]. Türk Halk Eğitim Merkezinin bu işe [illegible] böyle bir kurs düzenlemesi gerekten çok güzel bir [illegible] anne ve babaların geliştirdiğine [illegible] için büyük bir avantaj. Bunun yanında kursun öğretmenliğini üstlenen [illegible] [illegible] çok [illegible] [illegible] teşekkür[illegible] kendini gerekten [illegible] [illegible] [illegible] devam ettim. sabırla ve büyük hevesle kursu [illegible] olmasında benim için [illegible] [illegible] [illegible] [illegible] Okuldaki eğitimin bize daha [illegible] [illegible] olan çalışmalarıyla birlikte [illegible] [illegible].

Kursa başladığım 11 günden beri hem günümüzü hemen geçmişte yaşayan ikisi arasında düşünce yolculuğuna çıkıyorum. Bu yolculukta bazen üzülüyorum, geçmişte yaptığım hatalar için bazen seviniyorum, derslerde anlatılanlarla aynı paralelde olduğum için.

Bu kursun bana kazandırdığı en önemli meziyet "SABIR"dır.

Gerçekte benim herkese karşı sabrım yoktu. Hareketlerim her zaman ölçülü olurdu. Fakat kendi kızıma gelince herşey değişirdi. Sabırsız olur, onun yaptığı herşey gözüme batardı. Kızıma karşı gerekten çok [illegible] davranıyordum.

[illegible] [illegible] [illegible] [illegible] [illegible] kardeş gibi

[illegible] bir baş [illegible]. Bana öğrettikleri [illegible] "[illegible] ne için var" gibi. [illegible] görüyorum duydum, dinlemedim, şiddetle soruyorlar. Sonunda çocuklarla aralarında sorunlar [illegible] bilmiyor, bilmese karışıklıklar oluyor, çocuklar [illegible]. Halbuki onlar da bizim değerlerimiz. Ana kursa gelmiş olsalardı, tam çocuk [illegible] anne için iyi olurdu.

Halk eğitimin ana çocuk eğitim vakfı tarafından verilen bu kursun çok faydalı olduğunu ve [illegible] böyle bir kursun açılmasının çok faydalı olacağını düşünüyorum.

Ana-çocuk eğitim vakfı adına bize 15 hafta boyunca emek veren öğretmenimize tekrar teşekkürlerimizi bir borç biliriz.

Teşekkürler

[illegible] Saygılarımızla

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Ana çocuk eğitim kursu
Hava Sığınakları

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thanks to this course."

These words bring us to the next topic.

Changes in the Child Rearing Practices of Mothers

A lot of mothers have emphasized the fact that while they used to try to prevent undesirable behaviors by physical abuse, they have now stopped beating or handing out heavy punishments to their children. They state that the most important skill they have gained from the program is patience, that they have started seeing their children as human beings, have become much more understanding than they were before and have understood the importance of listening to the child. Thus many are now trying to understand the reason behind the behavior of children and trying to improve undesirable behaviors by means of giving explanations.

"I come from a strict family, and tried to make my child do everything that I said. I was intent on discipline and never let him talk and often hit him. In a 25-week period I have become closer with my child and we now really talk to each other."

"I also used to hit my child sometimes when I was mad at him and thought that could actually solve things, even if it was not frequent. Now instead, I treat him like I would an adult and not a child and ask the reasons behind his behaviors, and instead of getting mad and disappointing him, I make him understand why I get disappointed in his behaviors. This attitude works much better."

"I have learned from this program how to solve problems not by getting mad at his mistakes, punishment, beating or shouting but by searching the reasons behind the problem in an understanding manner without shouting. I now give importance to my child as if he is a grown-up person"

"Before starting the Program I used to hit my child when I got really mad... Now I am aware that beating and fighting are not and will not be of any solution. Now both my husband and I do not shout at him. Instead we give explanations to him. We can reach

conclusions by talking and we get wonderful results."

"I have realized in the groups that I have participated in how unreasonable and wrong I was in raising my child. During the 25-week period of lessons I have slowly improved the way I talked and my behaviors... I am trying to be more patient, understanding and for me the most important of all to give more explanations."

"I create more of a play environment for my child, I invite her friends over"

Changes in the Mother-Child Relationship

Mothers stated that they have built a closer relationship with their children with what they have experienced in the Program. While some said that they did not really give time and energy to their children before, now they report that they are more explanatory when they talk and make an effort to answer their questions properly. Most of the mothers stated that now they are much more considerate towards their chidren, spare more time for their problems and that they have learned to listen to their children.

"I have become more intimate and close with my children"

"Applying the things that I have learned in the program to my child enabled me to engage in a better dialog with him and strengthened the love bond between us. While not giving time and energy to his questions before, now I give explanations. After this Program I started to give more importance to my child's problems. I started giving special attention for his care food intake, health and clothing. He increased his play time and his sleep became more intense."

"I learned to listen to my child. As well as making myself be listened to."

"Before starting the course I was not really listening to or giving my energy to my children. However, I learned that being heard is a need for the child. From now on I try to hear my children's problems, to understand and to find solutions."

"We gained respect towards children. We at least learned to listen to the child when

he is telling something. Even if it was late, we understood that children are human beings and members of the family."

"I put myself in his place and I understand his feelings and communicate with him in a better way."

Change in the Mother's Own Personality

Following this program, mothers stated that it is not only towards their children that they are more patient but in general. They report that due to this program, they have learned ways to solve problems which they felt they could not deal with before. They also state that they feel stronger and more efficient, more confident as mothers, can express themselves better and make others listen to them. A lot of mothers stated that they had come to the program for the sake of their children but that the person who actually changed was themselves.

"I can think more maturely and calmly."

"I was aware of some of my mistakes, but did not know how to correct them. I have learned to correct my mistakes with our mother-child relationship classes and my child's mistakes with positive disciplinary methods. Now everything goes more smoothly."

"I only learned after going to this course how much there was to give to all my three children."

"Most importantly, we have learned to express ourselves in the best way. Who am I, what am I, how am I living? Or how can I best live under these circumstances that I am living in right now... I know clearly what I am as a woman and a mother and what I want. I am aware. And very happy. I have self-confidence and believe in myself."

"I now feel very strong and productive."

"I have learned many good things about children's education. Speaking to my

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children as a mother... I thank you for making me self-confident as a mother."

"I changed a lot. My child has changed a lot, as well. We are at peace with life."

Changes in the Family and the Father

Mothers reported that as they applied what they have learnt in the Program at home to other members of the family the atmosphere in the home has changed positively.

While some mothers state that their spouses' attitudes towards their children have changed others report that spouses have been affected by noticing the changes in themselves and that this has positive contributions for the relationship between spouses.

"I benefitted a lot from this program, for instance there are many changes in my child, myself and even in my spouse."

"... my relatonship with my spouse improved as the program continued. I realized that my approach towards him had changed, I became more calm and patient and I slowly obtained what I wanted."

"I see that my spouse changed a lot. He says it himself, anyway. He shows more concern towards our child, playing games and spending more time with him."

"My spouse used to think that the education would be no good, that it would be a waste of time. The main plan at home was discipline and punishment. But when we initially told him about the training he would get mad, later it created many changes in him as well and he started thinking in a more modern way."

"...of course there have been many positive changes both in me and in my family."

"Our whole close environment is aware of this change in me. A child ready for primary school, a more intimate mother with her child and I mean it a happy family, believe me."

Opinions About the Program

Some mothers have said that they had always wanted to do something and raise their children up better but did not know what could be done. They have stated that the program has filled a need in this respect. Mothers felt that they wanted to prepare their children for school, wanted to teach them certain things but were scared of making mistakes, wanted to send their children to kindergarten so they could be prepared for school but that they were unavailable or too expensive. They felt unable to find solutions but after the program many stated that they felt happy that they themselves could provide many things to their children with this program. In addition, almost all mothers emphasize the happiness of having participated in the program, that throughout the program they have looked forward to meetings and home visits. Mothers felt that although the program helped enormously with current problems it was really in the future that they felt the real benefits of the program would become apparent.

"I was feeling extremely sad about not being able to send my daughter to kindergarden because of her health problems. I wanted to be useful to my child and prepare her for primary school."

"My son started painting pictures and writing some of the letters on his own at home, he was saying mom help me, make me write something. And I was helping him. I kept thinking, though, that if I did something wrong it would be detrimental at school, and couldn't help him much...even my four-year old daughter constantly wants me to read her books. When I went to a bookstore to buy books for my children the prices shocked me... Thanks to this course we will own 8 story books and 25 CTPs. I want to thank the organization that has supported us financially as well as psychologically."

"I only have primary school education but I was thinking of sending my children to kindergarden so they could be prepared for primary school. However we have financial difficulties and could not afford it ... no matter how much we thank you it will not be enough for providing us such a service with no expectations from our part... believe me I am eagerly waiting for every Thursday to come."

"I want to emphasize one thing in particular: my child would be starting school next

year and I wanted to send her to a kindergarden for preparation before school but I could not because of certain reasons. I was very sad about this. Now I say to myself it is better that I didn't send her. In a kindergarden only my child would be educated. But thanks to this course I have also been educated together with my child."

"All of you who have contributed to the preparation of this program are people worth appreciation. Maybe now we can provide you with just a few dry thanks. Probably the actual reward to your contribution will be in the future when we raise children who are healthy, happy, beneficial for society and their families and who have established self-actualization."

The expressions which are summarize above have brought a new dimension, as mentioned in the beginning, to the evaluation of the Mother-Child Education Program. Of course, as one of the mothers reported, having long-term effects is an important feature for every program. An assessment of the long-term effects of the Mother-Child Education Program will not take place in a short time, in fact we don't even know whether this will take place or not. However, the long-term goal of the program, as one of the mothers has reported is really; raising children who are healthy, happy, beneficial for society and their families and who have established self-actualization.

We feel that the ones that should really be thanked are the mothers and their families who supported them, who believed in a program they had not seen a similar example of before, and participated to provide their children a better life and a **fair chance** at school.

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APPENDIX A
Immediate Effects

TABLE A1

PRE-LITERACY AND PRE-NUMERACY CHANGE SCORES

	MOTHER-TRAINED	NON- TRAINED	t	df	p
	change score mean	change score mean			
PRE-LITERACY	33.40	15.58	6.89	215	.000
PRE-NUMERACY	47.24	16.89	8.41	179.9	.000

TABLE A2

PRE-LITERACY AND PRE-NUMERACY CHANGE SCORES ACCORDING TO ENVIRONMENTAL STIMULATION INDEX AND GENDER DIFFERENCES

			PRE-LITERACY	t	df	p	PRE-NUMERACY	t	df	p
			change score mean				change score mean			
ENV. STIM.	TRAINED	STIMULATING ENVIRONMENT	35.4286	.01	60	.992	50.2286	.06	60	.956
		NON-STIM ENVIRONMENT	35.4815				49.7778			
	NON-TRAINED	STIMULATING ENVIRONMENT	24.00	3.85	71	.000	23.3226	2.65	70	.010
		NON-STIM ENVIRONMENT	8.8571				10.8537			
GENDER DIFFERENCES	TRAINED	GIRLS	38.7778	2.43	101	.017	54.9333	2.30	101	.023
		BOYS	29.2241				41.2759			
	NON-TRAINED	GIRLS	14.66	.48	112	.629	19.5918	1.19	111	.237
		BOYS	16.2969				14.8125			

TABLE A3
MOTHER'S CHILD REARING ATTITUDES

	MOTHER-TRAINED				NON-TRAINED				t	df	p
	change score mean				change score mean						
BEATING	-.3832				-.0431				2.94	221	.004
SHOUTING	-.4953				-.0603				2.90	221	.004
NOT ATTENDING TO THE CHILD	-.4206				-.0172				3.35	221	.001
EXPLAINING	.0841				-.1034				2.09	221	.038
PRESETTING THE RULES	.1963				-.0517				4.15	221	.000
DIVERTING ATTENTION	.2617				.0000				2.97	221	.003
ANSWERING THE QUESTIONS OF THE CHILD	ANSWERED APPROPRIATELY	DELAYED THE ANSWER	NO ANSWER	WRONG ANSWER	ANSWERED APPROPRIATELY	DELAYED THE ANSWER	NO ANSWER	WRONG ANSWER	**X^2**	**DF**	**P**
	80%	8%	7%	5%	61%	13%	12%	14%	10.33	3	.035
KEEPING THE PROMISE	KEPT THE PROMISE	DELAYED UNCERTAIN	DID NOT KEEP THE PROMISE	DELAYED	KEPT THE PROMISE	DELAYED UNCERTAIN	DID NOT KEEP THE PROMISE	DELAYED	**X^2**	**DF**	**P**
	40%	26%	6%	28%	23%	29%	17%	31%	10.87	3	.012
PERMITTING PLAY WITH MATERIALS WHICH MESS UP THE HOUSE	PREPARE ENVIRONMENT	PERMIT WITH RULES	PERMIT	NO PERMISSION	PREPARE ENVIRONMENT	PERMIT WITH RULES	PERMIT	NO PERMISSION	**X^2**	**DF**	**P**
	75%	18%	3%	4%	46%	18%	9%	27%	28.20	3	.000

TABLE A4
MULTIPLE REGRESSION ANALYSIS OF CHANGE SCORE OF PUNISHMENT OF THE CHILD

VARIABLES ANALYZED IN THE REGRESSION

Environmental Stimulation, Mean score of discussion part in the group observations, Change score of mother's self esteem, Change score of social support for mother

VARIABLES IN THE EQUATION	R^2	Beta	Standard Error of B	t	p
Change score of mother's status in the family	.08193	-.286235	.018753	-2.802	.0062

TABLE A5
MULTIPLE REGRESSION ANALYSIS OF CHANGE SCORE OF NOT ATTENDING TO THE CHILD

VARIABLES ANALYZED IN THE REGRESSION

Environmental Stimulation, Mean score of discussion part in the group observations, Change score of mother's self esteem, Change score of mother's status in the family, Change score of social support for mother

VARIABLES IN THE EQUATION	R square	Beta	Standard Error of B	t	p
Mean observation score for Group Discussions	.04905	-.221470	.116595	-2.130	.0359

TABLE A6
MULTIPLE REGRESSION ANALYSIS OF
CHANGE SCORE OF EXPLAINING TO THE CHILD

VARIABLES ANALYZED IN THE REGRESSION

Environmental Stimulation, Mean score of discussion part in the group observations, Change score of mother's self esteem, Change score of mother's status in the family, Change score of social support mother gets

VARIABLES IN THE EQUATION	R square	Beta	Standard Error of B	t	p
Mother's self-esteem change score	.07368	.295600	.026715	2.950	.0041
Environmental Stimulation	.13483	-.248473	.013071	-2.480	.0151

TABLE A7
MULTIPLE REGRESSION ANALYSIS OF CHANGE SCORE OF PROVIDING ALTERNATIVES TO THE CHILD

VARIABLES ANALYZED IN THE REGRESSION

Environmental Stimulation, Mean score of discussion part in the group observations, Change score of mother's self esteem, Change score of mother's status in the family, Change score of social support mother gets

VARIABLES IN THE EQUATION	R square	Beta	Standard Error of B	t	p
Environmental Stimulation	.09915	-.314880	.005768	-3.112	.0025

TABLE A8
MULTIPLE REGRESSION ANALYSIS OF CHANGE SCORE OF MOTHER'S SELF ESTEEM

VARIABLES ANALYZED IN THE REGRESSION

Environmental Stimulation, Mean score of discussion part in the group observations, Change score of mother's status in the family, Change score of social support mother gets

VARIABLES IN THE EQUATION	R square	Beta	Standard Error of B	t	p
Mean score for group discussions	.04353	.208647	.414771	2.001	.0484

TABLE A9
MULTIPLE REGRESSION ANALYSIS OF CHANGE SCORE OF MOTHER'S STATUS IN THE FAMILY

VARIABLES ANALYZED IN THE REGRESSION

Environmental Stimulation, Mean score of discussion part in the group observations, Change score of mother's self esteem, Change score of social support mother gets

VARIABLES IN THE EQUATION	R square	Beta	Standard Error of B	t	p
Change score of social support mother gets	.04569	-.213748	.115817	-2.053	.0431

TABLE A10
PRE-TEST POST-TEST, AND CHANGE SCORES FOR THE VARIABLES IN THE REGRESSION ANALYSIS (TRAINED GROUP'S)

VARIABLES	PRE - TEST		POST - TEST		CHANGE SCORE	
	MEAN	SD	MEAN	SD	MEAN	SD
PRE-LITERACY	60.40	23.58	93.74	29.70	33.21	20.34
PRE-NUMERACY	64.73	34.12	112.21	27.48	46.96	30.54
PRE-LITERACY / NUMERACY TOTAL	125.13	53.59	205.95	53.17	80.17	42.50
MOTHERS' STATUS IN THE FAMILY	27.82	5.16	28.76	4.84	1.04	3.84
SOCIAL SUPPORT MOTHERS GET	16.46	4.37	16.98	4.25	.67	3.58
SELF ESTEEM OF MOTHERS	25.10	3.05	25.64	3.14	.59	2.96
PUNISHMENT OF THE CHILD	.23	.54	.23	.49	.00	.71
EXPLAINING TO THE CHILD	.25	.55	.30	.55	.05	.79
PROVIDING ALTERNATIVES TO THE CHILD	.06	.23	.12	.33	.07	.34
NOT ATTENDING TO THE CHILD	.81	.73	.39	.68	-.42	.89

	MEAN	SD
ENVIRONMENTAL STIMULATION	38.22	6.35
DISCUSSION PART IN THE GROUP OBSERVATION	5.38	.78

APPENDIX B
Effects on Initial School Success

TABLE B1

LITERACY AND NUMERACY SCORES AND AVERAGE GRADES

	MOTHER-TRAINED	NON-TRAINED	t	df	p
	mean score	mean score			
LITERACY	84.7317	73.6966	2.99	169	.003
NUMERACY	94.9412	82.7879	3.15	173	.002
AVERAGE GRADES	4.8072	4.6404	2.29	166.70	.023

TABLE B2

MULTIPLE REGRESSION ANALYSIS OF TOTAL SCORE OF LITERACY AND NUMERACY SKILLS

VARIABLES ANALYZED IN THE REGRESSION Teacher's perception of cognitive characteristics of children, Mother training, Teacher's perception of personality characteristics of children, Cognitive environment in the classroom, Problems of child in the school, Teacher's perception of child's self-concept					
VARIABLES IN THE EQUATION	R square	Beta	Standard Error of B	t	p
Teacher's perception of cognitive characteristics of children	.21681	.436472	4.303782	5.965	.0000
Mother training	.24897	.181679	6.929216	2.483	.0142

TABLE B3

MULTIPLE REGRESSION ANALYSIS OF LITERACY SCORES AT THE END OF FIRST GRADE

VARIABLES ANALYZED IN THE REGRESSION Mother training, Pre-test score on pre-literacy, pre-test score of pre-numeracy, post-test score of pre-literacy, post-test score of pre-numeracy					
VARIABLES IN THE EQUATION	R square	Beta	Standard Error of B	t	p
post-test score of pre-literacy	.25447	.504451	.057276	7.595	.0000

TABLE B4

MULTIPLE REGRESSION ANALYSIS OF NUMERACY SCORES AT THE END OF FIRST GRADE

VARIABLES ANALYZED IN THE REGRESSION

Mother training, Pre-test score on pre-literacy, pre-test score of pre-numeracy, post-test score of pre-literacy, post-test score of pre-numeracy

VARIABLES IN THE EQUATION	R square	Beta	Standard Error of B	t	p
post-test score of pre-literacy	.36665	.605513	.054900	10.007	.0000

TABLE B5

LITERACY AND NUMERACY SCORES ACCORDING TO ENVIRONMENTAL STIMULATION AND STUDY ENVIRONMENT AT HOME INDEXES

			LITERACY mean score	t	df	p	NUMERACY mean score	t	df	p
ENV. STIM.	TRAINED	STIMULATING ENVIRONMENT	83.7692	.36	47	.717	90.7407	.11	49	.915
		NON-STIM. ENVIRONMENT	81.0000				90.0000			
	NON-TRAINED	STIMULATING ENVIRONMENT	85.3333	2.72	51	.009	94.3333	3.13	51	.003
		NON-STIM. ENVIRONMENT	67.4138				71.1034			
HOME STUDY ENV.	TRAINED	ADEQUATE ENVIRONMENT FOR STUDY	84.7037	.28	56	.778	90.7037	.68	56	.498
		INADEQUATE ENVIRONMENT FOR STUDY	82.7742				95.1935			
	NON-TRAINED	ADEQUATE ENVIRONMENT FOR STUDY	87.7391	3.28	58	.002	94.4348	2.84	59	.006
		INADEQUATE ENVIRONMENT FOR STUDY	68.7027				75.3421			

TABLE B6

MULTIPLE REGRESSION ANALYSIS OF TOTAL LITERACY AND NUMERACY SCORE AT THE END OF THE FIRST GRADE FOR THE CHILDREN WHO HAVE INADEQUATE STUDY ENVIRONMENT AT HOME

VARIABLES ANALYZED IN THE REGRESSION

Mother training, Study environment at home

VARIABLES IN THE EQUATION	R square	Beta	Standart Error of B	t	p
Mother training	.12104	.347902	11.372294	2.992	.0039

TABLE B7

MULTIPLE REGRESSION ANALYSIS OF AVERAGE GRADES

VARIABLES ANALYZED IN THE REGRESSION

Teacher's perception of cognitive characteristics of children, Mother training, Teacher's perception of personality characteristics of children, Self-esteem of mothers, Cognitive environment in the classroom, Problems of child in the school, Study environment at home, Mother's satisfaction with the child

VARIABLES IN THE EQUATION	R square	Beta	Standart Error of B	t	p
Teacher's perception of cognitive characteristic of children	.28107	.507221	.043466	6.900	.0000
Mother training	.31798	.193481	.069965	2.632	.0095

TABLE B8

DIFFERENCES IN "STARTS READING" DATE

	NUMBER OF CHILDREN											
	NOVEMBER	DECEMBER	JANUARY	FEBRUARY	MARCH	APRIL	MAY	KNOWS ALREADY	NOT LEARNED	X^2	DF	P
MOTHER-TRAINED	18	20	18	12	3	2	3	3	-	20.86	8	.008
NON-TRAINED	11	21	19	13	15	8	-	-	2			

TABLE B9

TEACHER'S PERCEPTION OF CHILD READINESS AND MOTHER'S INTEREST IN SCHOOLING

	MOTHER-TRAINED	NON-TRAINED	t	df	p
	mean	mean			
HAS APPROPRIATE BEHAVIORS	4.2381	3.9130	2.38	174	.018
ATTENTIVE	4.1176	3.7826	2.18	175	.031
CREATIVE	3.8571	3.4667	2.55	172	.012
CURIOUS	4.2941	4.0000	2.10	175	.037
SOCIALLY READY FOR SCHOOL	3.9333	3.6023	1.99	160.86	.048
COGNITIVELY READY FOR SCHOOL	3.9867	3.4831	2.82	161.89	.005
MOTHER IS INTERESTED IN SCH.	4.3647	4.0000	2.62	175	.010
MOTHERS' ATTENDANCE AT SCHOOL MEETINGS	4.5294	4.1957	2.14	175	.034

TABLE B10
MULTIPLE REGRESSION ANALYSIS OF TEACHER'S PERCEPTION OF COGNITIVE CHARACTERISTICS OF CHILDREN

VARIABLES ANALYZED IN THE REGRESSION Mother's interest in schooling, Cognitive readiness of the child, Mother training, Cognitive environment in the classroom, Problems of child in the school, Sex of the child					
VARIABLES IN THE EQUATION	R square	Beta	Standard Error of B	t	p
Cognitive readiness of the child	.26792	.395715	.063492	4.509	.0000
Mother's interest in schooling	.31027	.239176	.091343	2.726	.0074

TABLE B11
MOTHER'S ATTITUDES TOWARD SCHOOL

	MOTHER-TRAINED		NON-TRAINED		X^2	DF	P
MOTHER IS INTERESTED IN SCHOOLING	mean score		mean score		t	df	p
	4.4706		3.9348		3.19	168.68	.002
MOTHER SHOWED AN EXTRA EFFORT FOR HER CHILD'S SCHOOL SUCCESS	YES	NO	YES	NO	20.58	1	.00001
	89 %	11%	59 %	41 %			
ACCORDING TO MOTHER CHILD WAS READY FOR SCHOOL	READY	NOT READY	READY	NOT READY	20.58	1	.00001
	100 %	0 %	28 %	72 %			

TABLE B12
MOTHER'S CHILD REARING ATTITUDES IN THE FOLLOW UP STUDY

	MOTHER-TRAINED	NON-TRAINED	t	df	p
	mean	mean			
BEATING	.2674	.6196	3.64	170.36	.000
NOT ATTENDING TO THE CHILD	.2558	.4239	2.40	175.45	.018
EXPLAINING	.5930	.2391	3.39	151.11	.001
DIVERTING THE CHILD'S ATTENTION	.2442	.0217	4.30	101.16	.000
PREPARING ENVIRONMENT	.1860	.0217	3.66	107.04	.000

APPENDIX C

Evaluation of the Implementation

TABLE C1

GROUP OBSERVATION MEANS WITH RESPECT TO AREAS

AREA	FIRST GROUP OBSERVATION			SECOND GROUP OBSERVATION			THIRD GROUP OBSERVATION		
	MEAN (Max 7)			MEAN (Max 7)			MEAN (Max 7)		
WHOLE GROUP	4.9910			5.5066			4.9704		
AREA 1	5.7639			5.9983			5.4689		
AREA 2	4.8000			5.5848			5.5483		
AREA 3	4.6972			5.3117			5.3639		
AREA 4	3.6975			4.4615			2.8050		
DIFFERENCE BTW AREAS	F	DF	P	F	DF	P	F	DF	P
	69.70	3,103	.0000	11.26	3,103	.0000	142.18	3,103	.0000

TABLE C2

HOME OBSERVATION MEANS WITH RESPECT TO AREAS

AREA	FIRST HOME OBSERVATION			SECOND HOME OBSERVATION			THIRD HOME OBSERVATION		
	MEAN (Max 5)			MEAN (Max 5)			MEAN (Max 5)		
WHOLE GROUP	3.6653			4.1631			4.3933		
AREA 1	3.8709			4.3571			4.4159		
AREA 2	3.2174			3.6495			4.3071		
AREA 3	4.2361			4.3523			4.7014		
AREA 4	3.1938			4.1371			4.1631		
DIFFERENCE BTW AREAS	F	DF	P	F	DF	P	F	DF	P
	20.72	3,103	.0000	12.95	3,103	.0000	5.293	3,103	.0020

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APPENDIX D

Samples of the Mother-Child Education Program

A TOPIC FROM THE MOTHER - ENRICHMENT PROGRAM

IMPORTANCE OF PLAY AND IT'S EFFECTS ON CHILDREN'S DEVELOPMENT

Aims:

1. to make the mothers conscious about the important role of play on children's development;
2. to talk about the effects of different plays of the child's cognitive, language, emotional and physical development.
3. to discuss how play and development are interrelated.
4. to help mothers to find the answer why children do learn more easier during play.
5. to stress that the important thing is what the children gain during the play, i.e. the process not the product at the end of play.
6. to discuss the criteria of choosing toys and to examine the toys which can be made together with the child.
7. to make the mother conscious about the things she can do to support the child's play.

IMPORTANCE OF PLAY

Children constantly play during the day. But we usually consider play as silly, useless and naughty. We tend to think that time spent during play is wasted and complain that all our children want to do is play.

But what do you think that children should do? In other words, what is children's work? (Ask mothers and write the answer to the board) Children's play is a serious activity as work is to adults. PLAY IS CHILDREN'S WORK.

Studies done in recent years by experts have shown that play is very important. They have found that play helps children to learn about their environment, to adjust to their home, to understand events taking place around them, and to consolidate what they have learned or attained.

Especially during early years play is the child's most important and serious activity. According to children what we do is also play. When we are cooking they think that we are playing with pots and pans. By imitating what we do, by manipulating the toys, by trying, by using different materials they try to do the same and understand what we do. We call this play. But the child is trying to understand the world and to develop. As it is stated in a Chinese proverb "Things I hear I forget. Things I see, I remember. Things I do, I understand". In other words play helps the child to do different things and therefore helps her/him to understand the world.

THE EFFECTS OF PLAY ON CHILDREN'S DEVELOPMENT

Children play in many different ways. And every play has a positive effect on children's development. To find out how play effects children's development let's first remember the developmental areas.

What do we mean by cognitive development? (Try to make mothers to find the answers) Cognition, concept formation, problem solving, memory, language development.

How can we understand that the child's language develops? (Try to make mothers find the answers) Child's vocabulary improves, uses longer sentences, asks questions, understands better, and starts to express her/himself better.

How does a child develop socially? (Try to make mothers find the answers) The child starts to get involved with people around her/him, tries to be important. S/he tries to rule and be a leader. When s/he develops socially, s/he starts to understand and obey the rules of the community s/he is in, starts to understand other people and help them and s/he starts to share.

What kind of behaviors do we observe in children who develop emotionally? (Try to make mothers find the answers) Children start to know/learn characteristics of themselves, start to be aware of their emotions and express them, engage in activities they like.

What are the characteristics of children who develop physically? (Try to make mothers find the answers) Children whose large muscles develop feel the need to make lots of movements. Fine motor activities help to develop fine muscles.

Now, let's talk about how different plays of children help to foster different developmental areas.

PLAYING BALL

What do children get out of playing ball? (Try to make mothers to find the answers. Write the underlined answers on the board)

- Children learn concepts like fast-slow, down-up, middle-beside (Cognitive Development)
- Children learn that the games have rules and learn to obey them. For example, a child who plays football, has to learn the rules and obey them. (Social Development)
- They learn to control their temper. For example a child who gets angry and fights every time her/his team loose will not be accepted in the game anymore. So s/he learns to control her/his temper. (Social Development)
- They make friends. Play is the best situation to learn to communicate with other children and to make friends. (Emotional Development)
- They feel happy.
- They start to know themselves better. They start to differentiate their likes and dislikes. (Emotional Development)
- They practice their large muscles and learn to control them. A child who is jumping, running, climbing is making movements which are necessary for large muscle development. (Physical Development)
- They learn to kick something they see. This is important for foot-eye coordination. (Physical Development)
- If they play football in open-air they get vitamin D. (Physical Development)

BUILDING A TOWER

What do children get out of building a tower with wooden blocks? (Try to make mothers to find the answers. Write the underlined answers on the board)

- Children live new experiences and learn many things. Most of these experiences are very crucial for daily life. For example when a child is making a tower s/he learns equilibrium, and what to do to keep objects in equilibrium. S/he will use this knowledge throughout her/his life. (Cognitive Development)
- They consolidate the knowledge they have attained before. (Cognitive Development)
- They sustain their playful attitude. Therefore when they encounter a problem during play they try to solve it without feeling stress. So they learn to try different solutions. (Cognitive Development)
- They learn to learn. Children are curious during play, they invent things and they act persistently. These are the basics of learning something. For example when a child is trying to make a tower s/he learns how to arrange block to keep them straight and when the tower collapse s/he tries to build it again. (Cognitive Development)
- They are relaxed during play since nobody blames them because of the mistakes they make during play. And when children are not under stress they can try new things. (Cognitive Development)
- They practice their finger muscles. (Physical Development)

PAINTING PICTURES

What do children get out of painting pictures? (Try to make mothers to find the answers. Write the underlined answers on the board)

- They use many different materials and therefore acquire new experiences. For example they learn how to obtain new colors by mixing colors. (Cognitive Development)
- They use their mind, soul and body during play. They keep their attention focused on the things they are interested. This helps them to learn many things during play. (Cognitive Development)
- They remember the characteristics of objects. (Cognitive Development)
- They use their finger muscles. (Physical Development)
- They express their inner thoughts and obtain emotional relief. (Emotional Development)

PLAYING IN THE DOLLHOUSE

What do children acquire when they play in the dollhouse? (Try to make mothers to find the answers. Write the underlined answers on the board)

- They use different objects instead of real ones. They use a stick as a horse, a spoon as a microphone etc. (Cognitive Development)
- They learn to make plans. When children want to play in the dollhouse they plan who will be the mother, father and what they will do. (Cognitive Development)
- They learn to express themselves and to understand what others say. A child who can not communicate with others will have difficulty playing with other children. Moreover a child who can not wait his turn during conversations will not be able to

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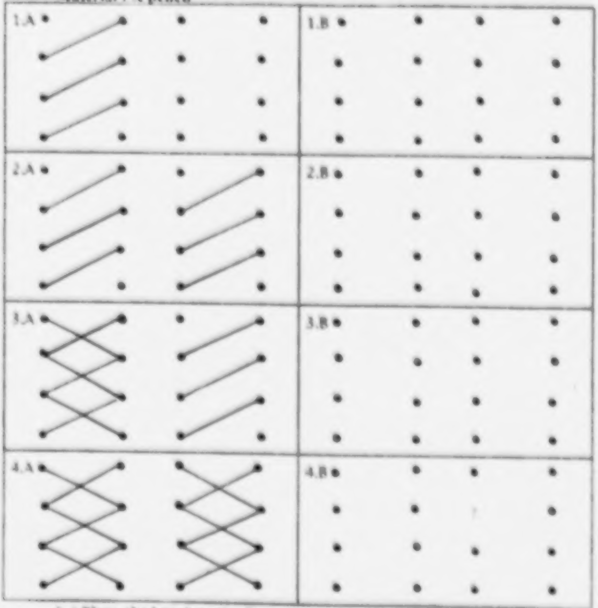
WORK SHEETS FROM THE COGNITIVE DEVELOPMENT PROGRAM

Week : 21

Activity : Hand- Eye Coordination
(Combining the dots)

Material : A pencil

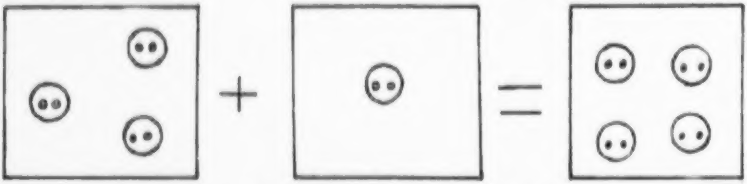


1. (Show the box A at the first row and say the following.)
DRAW IDENTICAL LINES TO THE NEXT BOX.
(Repeat this direction for the 2nd, 3rd and 4th rows.)
2. (Show the boxes A and B in the third row.) I WANT THE BOXES IN THIS ROW TO BE SAME AS THE BOXES BELOW. DRAW THE NECESSARY LINES.
3. (Show the boxes A and B at the second row.) I WANT THE BOXES IN THIS ROW TO BE SAME AS THE BOXES BELOW. DRAW THE NECESSARY LINES.
4. (Show the boxes A and B at first row.) I WANT THE BOXES IN THIS ROW TO BE SAME AS THE BOXES BELOW. DRAW THE NECESSARY LINES.
(Make the child draw all lines into the boxes.)

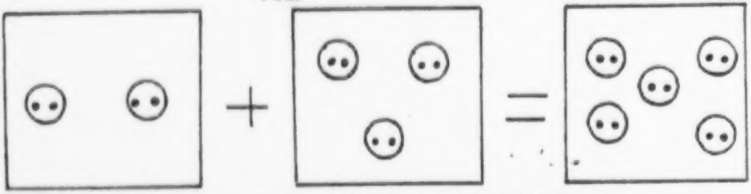
Day 3

Week : 21

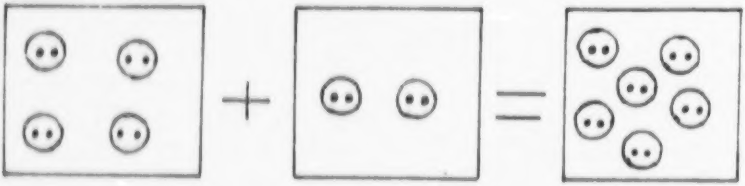
Activity: Prenumeracy
(Addition)



1. (Show the first box.)	HOW MANY BUTTONS ARE THERE ? - Three
(Show the second box.)	HOW MANY BUTTONS ARE THERE ? - One
(Show the third box.)	THERE WERE THREE BUTTONS, AND ONE MORE BUTTON CAME. HOW MANY BUTTONS ARE THERE IN TOTAL? - Four



2. (Show the first box.)	HOW MANY BUTTONS ARE THERE ? - Two
(Show the second box.)	HOW MANY BUTTONS ARE THERE ? - Three
(Show the third box.)	HOW MANY BUTTONS ARE THERE IN TOTAL? - Four

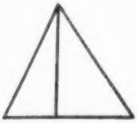
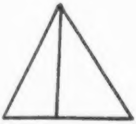
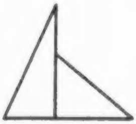
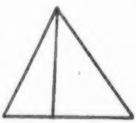


3. (Show the first box.)	HOW MANY BUTTONS ARE THERE ? - Four
(Show the second box.)	HOW MANY BUTTONS ARE THERE ? - Two
(Show the third box.)	HOW MANY BUTTONS ARE THERE IN TOTAL? - Six

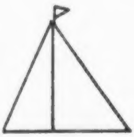
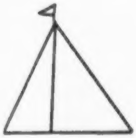
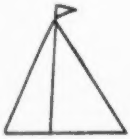
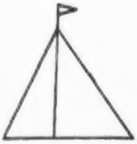
Day 4

Week : 21
Material : A pencil

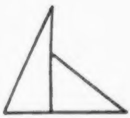
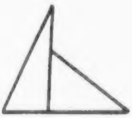
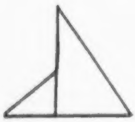
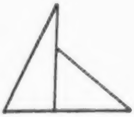
Activity : General Ability

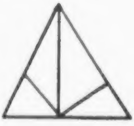
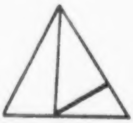
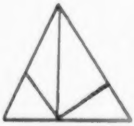
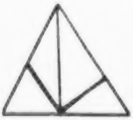
1. SHOW THE DIFFERENT PICTURE IN THIS ROW.
PUT A CROSS ON IT.

2. SHOW THE DIFFERENT PICTURE IN THIS ROW.
PUT A CROSS ON IT.

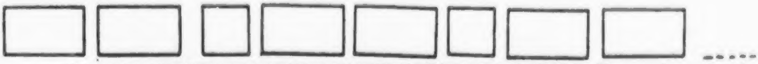
3. SHOW THE DIFFERENT PICTURE IN THIS ROW.
PUT A CROSS ON IT.

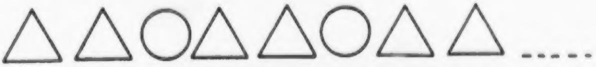
4. SHOW THE DIFFERENT PICTURE IN THIS ROW.
PUT A CROSS ON IT.

Day 5

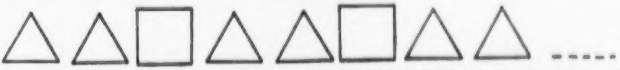
Week : 21 **Activity : General Ability**
Material : A pencil



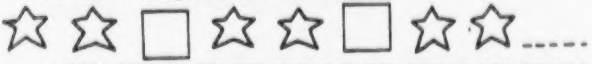
1. TELL ME THE SHAPES ABOVE IN THE ORDER YOU THEM ? - Rectangle, rectangle, square, rectangle, rectangle, square, rectangle, rectangle
(Show the shapes.) YES, TWO RECTANGLES, ONE SQUARE, TWO RECTANGLES ONE SQUARE AND TWO RECTANGLES ARE THE ORDER OF THE SEQUENCE.
WELL, IN ORDER TO LENGHTEN THIS ROW WHICH SHAPE SHOULD COME ON THE DASHES ? - A square
SO, DRAW A SQUARE ON THE DASHES.



2. TELL ME THE SHAPES ABOVE IN THE ORDER YOU THEM ? - Triangle, triangle, circle, triangle, triangle, circle, triangle, triangle
(Show the shapes.) TWO TRIANGLES, ONE CIRCLE, TWO TRIANGLES ONE CIRCLE AND TWO TRIANGLES ARE THE ORDER OF THE SEQUENCE.
WELL, IN ORDER TO LENGHTEN THIS LINE WHICH SHAPE SHOULD COME ON THE DASHES ? - A circle
SO, DRAW A CIRCLE ON THE DASHES.



3. TELL ME THE SHAPES ABOVE IN THE ORDER YOU THEM ? - Triangle, triangle, square, triangle, triangle, square, triangle, triangle
(Show the shapes.) TWO TRIANGLES, ONE SQUARE, TWO TRIANGLES ONE SQUARE AND TWO TRIANGLES ARE THE ORDER OF THE SEQUENCE.
WELL, IN ORDER TO LENGHTEN THIS LINE WHICH SHAPE SHOULD COME ON THE DASHES ? - A square
SO, DRAW A SQUARE ON THE DASHES.



4. TELL ME THE SHAPES ABOVE IN THE ORDER YOU THEM ? - Star, star, square, star, star, square, star, star,
(Show the shapes.) TWO STARS, ONE SQUARE, TWO STARS ONE SQUAREE AND TWO STARS ARE THE ORDER OF THE SEQUENCE.
WELL, IN ORDER TO LENGHTEN THIS LINE WHICH SHAPE SHOULD COME ON THE DASHES ? - A square
SO, DRAW A SQUARE ON THE DASHES.

Day 5

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FEW PAGES OF A STORY BOOK

ŞAŞKIN

Gülçin Alpöge

Resimleyen: Gamze Baltaş

Telif Hakkı Anne Çocuk Eğitim Vakfı'na Aittir.

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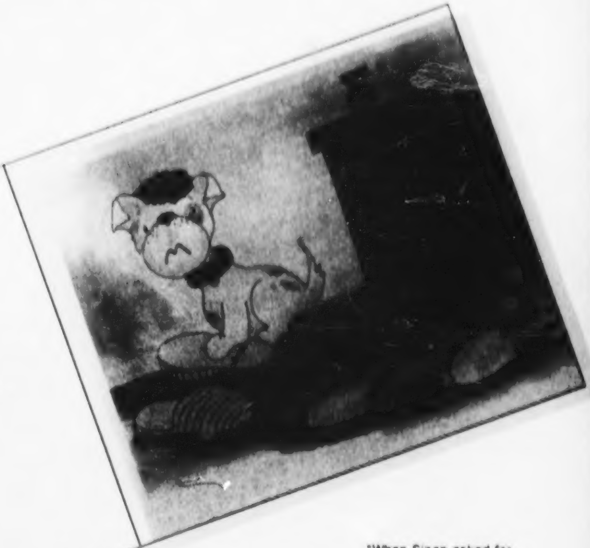
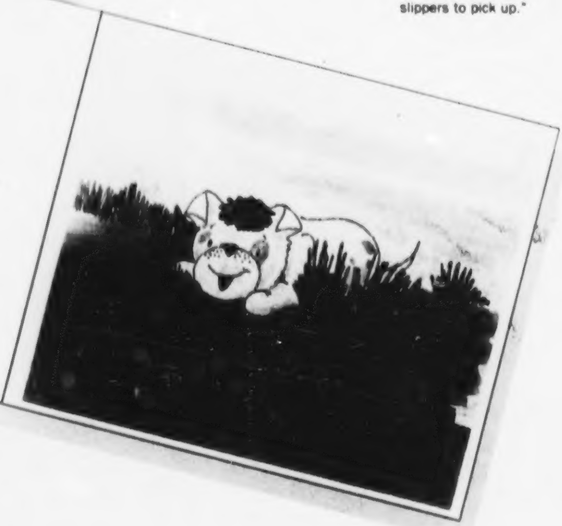
Sinan terliklerini isteyince hangi terliği alacağını bilememiş



"When Sinan asked for his slippers Shashkin could never tell which slippers to pick up."

Bir gün gezinirken göldeki balığa "Selam sana, kurbağa" demiş. Balık ses çıkarmamış, yüzmüş gitmiş



"One day when he was strolling by the lake he said 'hello frog' to a fish! The fish said nothing. He swam on."

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A FAIR CHANCE

Every child has the inherent capacity to reach his or her full potential. A child's optimal development level is above his actual level, but the immediate environment of the child is an important factor in the actualization of this optimal development. The development level of children brought up in developmentally "at risk" environments is likely to be lower than that of children brought up in low risk environments, and this developmental difference can continue over a lifetime. Can a fair chance be provided to those children in their education and therefore in their future lives?

This book discusses the content and the effects of the Mother Child Education Program - an early childhood and an adult education program implemented widely in Turkey - and explains how a fair chance can be provided. The book shows how support in early years can effect the development of the child and how enrichment of the child's "environment" can contribute to his or her development and school success. It also presents the reader with an example of a multipurpose education model which can be used to disseminate early childhood education at a low cost to groups who are most in need.

Sevda Bekman is an Associate Professor in the Faculty of Education, Boğaziçi University, Istanbul, Turkey.

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